American Druggist and Pharmaceutical Record.

Founded 1871

VOL. XXVIII. No. 4.
WHOLE NO. 345.

NEW YORK, FEBRUARY 25, 1896.

Issued Semi-Monthly.

ISSUED SEMI-MONTHLY BY THE

AMERICAN DRUGGIST PUBLISHING CO.,

65 West Broadway, New York.

A. R. ELLIOTT, President.

CASWELL A. MAYO, Ph.G., - - - - - - Editor.
THOMAS J. KEENAN, - - - - - Associate Editor.
IRVING J. BENJAMIN, - - - - Business Manager.

Chicago Office, 60 Wabash Avenue.

SUBSCRIPTION PRICE.

If paid in advance direct to this office - $1.50
For Foreign Countries - - - - - - - - 2.50
Single Copies - - - - - - - - - - - - .15

NET ADVERTISING RATES.

	24 Times	12 Times	6 Times	1 Time
One Page....	$864.00	$480.00	$270.00	$50.00
Half " ...	456.00	258.00	144.00	27.00
Quarter " ...	240.00	138.00	78.00	15.00
Eighth " ...	132.00	75.00	42.00	8.00
One Inch	48.00	27.00	15.00	3.00

Special Rates for Cover and preferred positions will be quoted on Application.

The AMERICAN DRUGGIST AND PHARMACEUTICAL RECORD is issued on the 10th and 25th of each month. Changes of advertisements should be received by the 1st and 15th of each month.

We are not responsible for any money paid to agents. All communications should be addressed to the American Druggist Publishing Co., 65 West Broadway, New York, and all remittances made payable to them.

LEADING ARTICLES.

Urine analysis for pharmacists furnishes the subject for an interesting address, by Professor Bartly (page 115).

The position of the naval and military apothecaries of Holland, is given (page 117), in continuation of the series begun last October.

The meetings of the American Chemical Society, of the Society of Chemical Industry (page 119), and of the Philadelphia College of Pharmacy, furnishes several notes of interest. Mr. Gilpin's formula for "Bitterless Cascara Sagrada" (page 119), is particularly valuable.

The valuable paper by Prof. Dragendorff on the detection of the newer medicaments is concluded on pages 120 and 121.

As ingenious arrangement of apparatus for continuous repercolation is illustrated on page 122.

The literature of the qualitative examination of acetanilid is condensed and presented most acceptably on page 122. An excellent article by Lyman F. Kebler (page 124), treats of recent methods of cinchona assay.

A most profound and scholarly disquisition on the use of drugs, from the pen of Dr. W R. Gowers, appears on page 125.

"WAR ON MUSLIN DRUGGISTS."

FROM the president of the State Pharmaceutical Examining Board of Pennsylvania we are in receipt of a communication touching upon the enforcement of pharmacy laws by pharmacy boards, in which he intimates that our war on muslin druggists has struck a popular chord among the druggists of Pennsylvania. Mr. EMANUEL says that druggists all over the State have written to the board as a result of the appearance in our last issue of the editorial article headed "Enforcing the Pharmacy Laws."

That affairs pharmaceutical in Pennsylvania are in a better condition than in Kings County, N. Y., is made evident by a report from the pharmacy board showing that in a canvass of 185 stores only eight out of the number were found selling poisons in contravention of the pharmacy act.

MEETS WITH POPULAR APPROVAL. It is gratifying to observe the support which is being accorded by the public generally to the officers of the different boards of pharmacy throughout the country, in their efforts to regulate the sale of drugs and medicines. There was a time when any action looking to the prosecution of illegal sellers of poisons would bring popular odium upon the parties concerned in it; but public sentiment has undergone a change within a recent period, and it is now no longer the rule to find complaints of class legislation, etc., whenever new amendments to existing pharmacy laws are proposed.

A NEW WAY TO SUPPRESS CUTTING. It has always seemed to us that the various local pharmaceutical societies and organizations might have met with a fuller measure of success in their efforts to regulate the prices and sales of patent medicines if they had approached the subject from a different standpoint. Vermin destroyers are not the only form of proprietary preparations which are used as a means of self-destruction, or which cause death through accidental poisoning. There are many proprietary medicines on the market to-day which contain varying amounts of scheduled poisons. Why should not the local branches of the Interstate Retail Druggists' League co-operate with the State pharmacy boards, and investigate the sale of poisons by unregistered persons? Agents might be employed to purchase supplies of suspected nostrums and have them carefully analyzed to determine their poison content, and then, if it is found that the preparations purchased contain even traces only of some deadly poisonous drug in each dose, but which taken in bulk would cause death, let the proper officers bring the matter to the attention of the courts and institute proceedings against the dry goods man or grocer who sold the poison.

Action of the same kind could be carried out in cases where pharmacists carry their ideas of business competition so far as to sell articles below actual cost. Where adulteration or sophistication is suspected, why cannot an officer of the pharmacy board, or some one detailed from the local association, make purchases at the cutter's store, and if it is found on examination that the article sold is below the standard requirements of strength or purity, prosecute the dealer for contravening the law?

A LESSON IN THIS. Action of this kind would constitute a useful lesson to the public, as it would be a means of directing attention to the fact that buyers do not always effect a saving by making purchases at such stores, but are usually cheated with cheap drugs of inferior quality.

THE ENGLISH WAY. The idea is by no means a new one, since the Pharmaceutical Society of Great Britain has worked along the lines indicated with unvarying success for several years past, and it is fairly well known in England to-day that no grocer or department store keeper dare sell certain proprietary articles which had hitherto been freely sold by them.

The latest case in which the Society has been successful was that of a grocer

who was charged with selling such a common article of commerce as fly papers. Dr. PAUL, the editor of the *Journal* of the Society, made several purchases of the paper, and finding it to contain large quantities of arsenic, which could be easily extracted by simple immersion of the sheets in water, a prosecution was instituted, and the result has been that the lower courts have decided that poisonous fly papers can only be sold by persons registered as chemists and druggists.

There is no reason why similar cases could not be prosecuted and brought to trial in this country.

THE INCREASE IN PRICE ON PROPRIETARIES.

THE retail druggists of this country have very generally criticised the action of several proprietors who have advanced the list prices on their goods. The advance made on Paine's Celery Compound in particular seems to have met with most severe criticism. Many druggists hold that the advance in the price of 75 cents per dozen will fall wholly upon the retailer, who will be unable in any way to recoup himself. This argument holds good, however, only where full prices or very nearly full prices prevail, for where the selling price has been cut down to the list jobbing price the cutters will be compelled to advance their price in proportion to the advance of the manufacturers. Singularly enough, however, the most serious criticism of the advance seems to come from those quarters in which the price has been most deeply cut.

If, as has been alleged, the increase in the price is accompanied by the adoption of more stringent measures for the prevention of the sale of goods to cutters, either directly or indirectly, then the retailer will very gladly submit to it, for all that the retailer expects is to be placed on exactly the same footing as to price as the cutter. Ex-President MAIN and Ex-President ELIEL of the National Wholesale Druggists' Association agree in thinking that the ultimate result of the movement will be beneficial to the retailer, and the first named gentleman, in an interview with a representative of the AMERICAN DRUGGIST, stated that cutters were finding greatly increased difficulty in securing supplies even now.

One motive prompting the increase is indicated in the letter from Dr. R. V. PIERCE, which appears on another page. The only inference to be drawn from that letter is that the increase in price has been made in response to the demands for a wider margin for the jobbing trade. In one instance, however, that of Scott's Emulsion, this inference is not warranted, as the remarkable rise in the price of cod-liver oil is a sufficient justification for the advance. In no other case, as far as we are aware, has any specific justification been set forth. If, then, the advance has been made in deference to the clamor of the jobbers for "protection" and a wider margin, the proprietors owe it to themselves to insist that the jobbers see to it that the cutters do not secure supplies. If Dr. PIERCE is correct in believing that the wider margin of rebate will simply offer greater inducements to the cutter, then indeed the retailers have a just cause of grievance to add to an already long list.

Jobbers and proprietors must discharge the responsibility assumed by them under the rebate plan if they wish to retain the good will of the retail trade, and any failure to do so after the granting of the increased margin by the proprietors will certainly work a most serious damage to whichever party is at fault.

AFFAIRS IN OHIO.

THE latest movement of the Ohio Food and Dairy Commission seems to us to scarcely be in accord with that discretion which is so important a portion of the equipment of public officials. We have always argued that the enforcement of a pure food and drug law in conjunction with a pharmacy law was the greatest hope for legitimate pharmacy, and have held to this opinion despite adverse criticism. But a one-sided enforcement of any law is unjust, and for the commission to confine its attention almost exclusively to the drug trade, to the neglect of infractions of the law in other lines, works a hardship and an injustice. It may be that the State of Ohio has been wholly purged of offending grocers and dairymen, but the druggists suffering from the zealous attentions of the commissioner seemed inclined to doubt it. The defeat of the commissioner on one or two cases may also be taken as an indication that the severity of the steps being taken does not meet with the undivided support of the public, which is beginning to look upon the work as somewhat in the nature of persecution rather than prosecution.

WHERE IS THE PHARMACY BOARD?

Any rigid enforcement of the adulteration law without an equally rigid enforcement of the pharmacy act operates as a one-sided enforcement so far as the pharmacist is concerned. If the pharmacist is to be held up to the letter of the law as regards the character of all the drugs sent out then the grocers and general merchants should be held up to the letter of the law as regards the sale of poisons and medicines. With all the activity evinced in different sections of the United States by the boards of pharmacy we have not heard anything from the Ohio board aside from the discharge of routine duties. Has not the board authority or means to enforce the law, or is it possible that there are no offenders in Ohio? While this has no direct bearing on the acts of the food commissioner it has some relation to the subject, for if a few dozen offending grocers and department stores were hauled up by the Pharmacy Board with as much blare of trumpets and beat of drums as accompany the apprehension of a druggist for selling phosphoric acid above the pharmacopœial strength the effect on the public would be most salutary as directing attention to the fact that the druggists are not the only sinners.

We still believe that pharmacy will be the gainer in the end by the present agitation, but we do not approve of the extreme measures resorted to by the commissioner and feel confident that the next election will show that the majority of the people of Ohio condemn them.

OF WRITTEN RECOMMENDATIONS.

HOW much weight should attach to written recommendations of clerks it is difficult to determine, but in the opinion of a large number of employers they are entitled to but very slight consideration.

It by no means follows that all written testimonials presented by applicants are untrue, or even that a majority are, but it does mean that a sufficient number of them are written with a "mental reservation" on the part of the writer to seriously impair the value of all written recommendations.

When asked for a written recommendation an employer can scarcely decline to furnish one of some sort unless the employee has been either notably incompetent or downright dishonest. The letter of recommendation may be literally true and still be misleading. A prominent down town druggist recently had occasion to investigate the record of an employee who had come to him with good written recommendations, and found that the writer of one of the recommendations had the gravest doubts both as to the honesty and sobriety of the clerk, but as he had no positive proof of dishonesty he had not felt justified in refusing the requested recommendation. This discovery but confirmed the druggist in a resolution formed long since never to place much reliance on unsupported written testimonials.

The Best of American.

I consider the AMERICAN DRUGGIST AND PHARMACEUTICAL RECORD the best of all of the American journals issued.

EDW. PLUMMER.

Bartlett & Plummer, Druggists.

NEW YORK—405 FIFTH AVENUE AND 1300 BROADWAY, January 23, 1896.

The Examination of Urine by Pharmacists.

Physical Characteristics of Normal Urine—Color, and Its Significance—Transparency and Turbidity—Quantity as an Index of the Physical Condition—Specific Gravity—Urea and Its Estimation—Abnormal Constituents Found in Urine—Albumin, Blood and Glucose, their Detection and Significance.

At the last meeting of the Brooklyn College of Pharmacy, Professor Bartley, dean of the faculty, delivered an address on the subject of the examination of urine.

He prefaced his remarks by a statement that it was rather misleading to speak of his proposed address as having for its subject the examination of urine by pharmacists, because he did not propose to cover the entire field, but rather to direct attention to some of the more important physical characteristics of normal and abnormal urine, and to the deductions which might be drawn from an observation of them.

Pharmacists are frequently called upon to make some sort of an examination of urine, said Professor Bartley, and if some knowledge of urinary analysis were more general among the pharmacists he thought that they would be more frequently requested to make examinations than they now are. At all events, it was highly important that the pharmacist should have sufficient knowledge of the subject to prevent himself from being placed in the disagreeable position of being entirely ignorant when approached by a physician. The important physical characteristics of urine may be classed under the headings of color, odor, transparency, reaction, quantity, specific gravity, etc.

COLOR.

Normal urine is of an amber color, the depth of the shade varying in proportion to the quantity of the fluid and the quantity of the normal coloring water. Where the normal quantity of coloring matter is secreted the depth of color, is of course inversely proportional to the quantity of urine voided in 24 hours—that is, the larger the quantity passed in 24 hours the higher the color, the deeper the color. Some knowledge of the quantity passed may be deduced from the color of the specimen. A very light color indicates either high dilution or a lessened execretion of the coloring matter, and this will be found in urine from diabetes patients, where the quantity is very large, in hysterical women, and in those forms of Bright's disease accompanied by an increased secretion of urine. Many specimens of urine grow darker in color on standing a few hours—never paler.

A red colored urine usually indicates blood, blood coloring matter, fever, or the action of certain medicines or foods. Magenta, crysophanic acid, or logwood may color the urine reddish, rhubarb or senna, brown ; santonin, or picric acid, yellow ; carbolic acid, tar, or arseniuretted hydrogen may impart a greenish black color ; methylene blue may produce a grass green or blue color ; resorcin, salol, antipyrin and a considerable number of the phenol derivatives recently introduced into medicine may cause the appearance of a violet red color due to their property of destroying the red blood cells, which destruction is followed by the elimination of the coloring matter by way of the urine. The speaker here took occasion to say that the medical profession was looking with less favor on these medicine. Rarely blue urine is observed due to the presences of chyle. The blue color is very seldom observed in fresh specimens.

TRANSPARENCY.

Normal fresh urine should be transparent, or showing merely a faint translucent cloud of mucus and slightly acid in reaction. The acidity increases somewhat the first few hours after the urine has been passed, this change is generally termed the acid fermentation. During this period a sediment, more or less abundant, frequently separates. It is almost always, if red or pinkish, due either to uric acid or to the acid urate of sodium. If deep red, it is probably caused by blood. If white, either pus or earthy phosphates are indicated. This last sediment, however, can only appear in neutral or alkaline urines, and immediately dissolves on rendering the urine acid. On heating the urine with a portion of the sediment the acid urate dissolves, the phosphate is not affected, and in the case of pus the sediment becomes more pronounced from the precipitation of albumen, which is always present when pus is found. A weak alkali will dissolve the acid urates, but not the phosphate, and will convert the pus into a gelatinous mass resembling raw white of egg. Pus effervesces strongly with hydrogen dioxide, which will serve to distinguish it at once.

REACTION.

The reaction of normal urine, as above stated, is usually slightly acid, this is ordinarily determined by dropping into the urine two small strips of litmus paper one red, and the other blue. A very convenient means of applying this test is presented in tablets of sugar of milk colored with litmus solution. These tablets are more easily handled and less likely to deteriorate than paper, and are, if properly made, extremely remitive.

On standing for a considerable time, varying with the temperature the composition of the urine and the exposure to air, the acidity gives way to an alkaline reaction caused by the conversion of the urea into ammonium carbonate under the influence of certain bacteria, chief among which is the micrococcus ureæ. This is termed the "alkaline fermentation" of urine, and it occasionally takes place in the bladder, especially in diseased conditions of this organ, or from retention of the urine too long in the bladder, or from inability to entirely empty it. A urine that has become alkaline from fermentation can be distinguished from one made alkaline by the presence of fixed alkaline by the behavior of a slip of red litmus paper when dipped in the urine, and dried at a gentle heat. If the alkalinity is due to the presence of ammonium carbonate the carbonate is volatilized, and the litmus resumes its red color, but if fixed alkalies are present the blue color remains unchanged.

ODOR.

The odor of normal urine has been described as aromatic. A putrid odor or an ammoniacal odor, or the odor of sulphuretted hydrogen, are occasionally met with, and are, of course, abnormal.

Certain medicinal substances, and some articles of food may impart their odor to urine. Turpentine, for instance, may impart the odor of violets, cubebs, valerian, copaiba, asparagus, garlic, etc., all sometimes impart a characteristic odor to urine.

QUANTITY.

The quantity of urine passed in 24 hours is about 50 fluid ounces ; varying 5 or 10 ounces within physiological limits The quantity is increased by excessive drink, by increase in the amount of food taken, by disturbance of the circulation due to anxiety or emotion, hysteria, cold weather, and by certain medicines which increase the force of the heartbeat, and then raise the general blood pressure in the arteries. The quantity is decreased by abstention from drinking fluids from lack of exercise, or food, and sometimes from disturbances of the circulation due to emotion, etc.

In disease the urine is usually diabetes insipidus, diabetes mellitus, and in certain forms of Bright's disease. The quantity is decreased in all acute fevers and in diarrhœa, and in most chronic wasting diseases and in starvation. Succi, during his fast, passed as little as 8 ounces per day, while the normal quantity should, as previously stated, be about 50 ounces.

SPECIFIC GRAVITY.

Specific gravity varies between 1,018 and 1,022, 1,020 may be regarded as normal. In disease the variation is from almost the specific gravity, as water to as high as 1,050. When the specific gravity is taken in conjunction with the quantity passed in 24 hours this will give us an important insight into what is going on in the body. It has been found that the last two figures of the specific gravity, when no abnormal solids are present, very nearly represent the number of grains of solid matter in one fluid ounce of the urine. If then, the specific gravity of 1,020 represents 20 grains of solid matter in each ounce of urine, and 50 ounces of such urine be passed in 24 hours, it will be seen that the normal amount of solid matter passed is about 1,000 grains for a man of the average size of 150 pounds, and great variation in these figures indicates some serious derangement either in the changes going on in the body, or in the power of the kidneys to eliminate the solids.

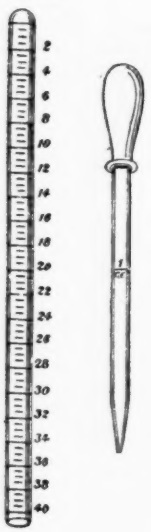
If, for example, the total solids should drop below 700 grains in 24 hours, it will show either that the kidneys are unable to eliminate them or that the solids are not produced. If the patient had been taking a fair amount of food the latter supposition may be considered as almost conclusively established, and in this case

a serious danger would be indicated, if the total solids drop to 500 grains or less in the above circumstances, the person is in danger of being poisoned by the retained solid waste products, and this would be almost conclusive evidence of Bright's disease, irrespective of whether any test for albumin had been made or not; if, on the other hand, the solids thus computed are much above 1,000 grains in the 24 hours, it would indicate some destructive process as going on in the organism, such as tuberculosis, or a wasting fever, or the elimination of some abnormal substance, such as glucose, pus, etc. If the solids were very much above normal we could almost certainly predict that sugar would be found in the urine. This is an exceedingly important point.

UREA AND ITS ESTIMATION.

About one half of the solids excreted, or about 500 ounces in 24 hours, are organic. While the above methods of computing the solids is approximately correct, it cannot be regarded as reliable as would be a quantitative estimation by chemical means. Since the quantity of urea excreted is generally regarded as an index of the tissue changes going on in the body the quantity eliminated is important, and methods have been perfected by means of which any one can easily make an estimate of the urea at but slight expense of time or money.

FIG 62.



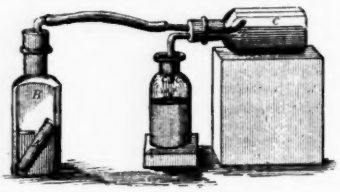
BARTLEY'S UREOMETER.

The lecturer here called attention to Squibb's process for estimating urea, and exhibited Squibb's apparatus. He also showed his own uremoter, which had the advantage to the practical man that the scale gives direct readings, showing the number of grains of urea in one ounce, when 1 ccm. of urine is used for the estimation. The apparatus consists of a graduated tube closed at one end, and of a pipette with a mark, showing the point to which it must be filled to contain 1 ccm.

BARTLEY'S UREOMETER.

The tube is utilized as follows:

A 25 per cent. solution of K Br is added to the fifth division. The chlorinated soda solution is then added to the fifteenth or twentieth division. The tube is now inclined, and pure water poured carefully down the side of the tube, and floated upon the top of the fluids already in. One ccm. of urine is then added, in the same inclined position, so that it will not mix with the reagents below, but remain in the water at the surface of the fluid. The open end of the tube is now quickly closed with the thumb, and the top firmly grasped in the right hand. The tube is now inverted, and the contents well mixed. A rapid decomposition takes place, which is usually ended in from 3 to 5 minutes. During this time the liquid is kept agitated without violent shaking. As soon as the effervescence has ceased, the reading is taken at the surface of the fluid, with the tube still held in the inverted position. It is now opened under water, when the column of fluid in the tube will fall, and the reading is taken again. It is best to have a wide, deep jar for the water, so that the tube may be depressed to bring the surface of the liquid in the tube to the surface of the water in the jar; but an ordinary bowl may be used, as the error caused by the difference of three or four inches of water is very slight. The difference in the two readings gives the number of grains of urea in a fluid ounce of urine. This quantity, multiplied by the number of fluid ounces passed in 24 hours, should be not far from 500 grains. A less quantity than 350 grains in an adult, who is eating the usual amount, should be regarded as pathological, and suspicious of nephritis, or of deficient kidney excretion.



SQUIBB'S UREOMETER.

Squibb's urea apparatus is a very simple apparatus, as stated by the lecturer, and can be easily improvised in a drug store. It consists of two wide-mouthed bottles, the larger of which (C), capable of holding about 250 ccm., is fitted with a rubber stopper, through which is passed a curved delivery tube and a short straight tube, the latter connected by a piece of rubber tubing to the short glass tube in the rubber stopper of the smaller bottle or generating-bottle (B). In the generating-bottle is a small test tube (A).

Into the test tube C is placed 5 ccm. of urine, and into the smaller bottle B is put 20 ccm. of the hypobromite solution, or strong liquor sodate chlorinate. The test tube is then placed in the generating bottle B, care being observed that the urine and the reagent do not come in contact. The larger bottle A is now filled with water, and the two bottles connected by the rubber tube, the larger bottle being placed on its side upon a block, and when all connections are tight, the generating-bottle is shaken so that the urine will mix with the reagent.

Decomposition takes place, and the generated gas passes into the bottle C, displacing water, which is caught in a graduated cylinder, or other measuring vessel. The volume of water displaced is equivalent to the volume of gas evolved.

Each ccm. of nitrogen gas evolved at 0 degree C., and normal pressure represents 0.0027 gm. of urea. Then by multiplying the number of ccm. evolved by this number the quantity of urea in the 5 ccm. of urine taken is ascertained.

The volume of gas obtained, when the operation is conducted at ordinary temperatures, should always be reduced to its corresponding volume at 0 degree C. and 760 mm.

Abnormal Constituents Found in Urine.

Pathological urine frequently contains abnormal constituents which furnish a valuable clue to the condition of the patient. The most of important of these are albumin, globulin, glucose, bile coloring matters, and acids, blood, blood-coloring matters, pus, chyle, and abnormal sediments. The speaker said that the delicacy of some of the older tests left much to be desired, and that several of them had been virtually superseded by improved methods in the work of careful analysts.

TO TEST FOR THE PRESENCE OF ALBUMIN.

The following test was recommended for the detection of albumin. Acidulate the urine with acetic acid, filter if mucin be thrown down, and then add a few cc. of a solution of potassium ferrocyanide, or float the acidulated urine on the surface of the ferrocyanide solution. If albumin be present a white precipitate will appear. Neither peptone, mucin, nor alkaloids are thrown down by this test.

TO DETECT THE PRESENCE OF BLOOD.

Blood may be detected chemically by mixing a small portion of the urine in a test tube with an equal volume of a mixture of freshly prepared tincture of guaiac with turpentine, which has been exposed to the air for some time. If blood-coloring matter be present a blue color will appear the depth, color, and the rapidity of its development. Pus also reacts to this test. Saliva and salts of iodine also do so, but only after a considerable lapse of time.

GLUCOSE.

The lecturer referred again to the fact that the specific gravity was a clue to the presence of sugar, the excretion of large quantities of light-colored urine of high specific gravity, indicating the probable existence of diabetes mellitus. The bismuth test was commended in preference to Fehling's, the test being applied in the following modified form: A solution is made of bismuth subnitrate, 2 gms.; Rochelle salt, 4 gms.; sodium hydroxide, 8 gms., and distilled water, 100 ccm. The urine is heated to boiling, and a few drops of this alkaline solution of bismuth is added, and on continuing the boiling after the last addition the mixture will turn black, if glucose be present. Before applying this test the albumin should be removed as if present albumin itself will grow black, precipitate with the bismuth solution.

From a New Subscriber.

I consider your journal one of the best; just keep it up to the present standard and I will always be a subscriber.

GEO. E. PIERSON.

HOPEWELL, N. J., January 15, 1896.

PHARMACISTS IN THE ARMIES AND NAVIES OF THE LEADING EUROPEAN STATES.*

X.

Holland.

In Holland and in the Dutch colonies the troops, including the officers, generally receive their medicines from the military pharmacies in the garrison hospitals. If troops or officers on duty are at a place which has no military pharmacy, the medicines are procured from a civilian pharmacy. If troops are accompanied outside of their garrison by a surgeon, he administers the simple kinds of medicines out of a medicine chest which is taken along.

The medical pharmacies in Holland obtain their stock of drugs, chemicals and pharmaceutical preparations from the "Imperial Medical Central Station" in Amsterdam.

IN THE DUTCH EAST INDIAN COLONIES.

In the Dutch colonies in the East Indies only the very small garrisons are without surgeons and military pharmacies. In such cases the commander of the garrison has the necessary medicines at his disposal. The military pharmacies in the Dutch East Indies, on the other hand, also furnish civilians medicines on payment.

The medical pharmacies of the Dutch East Indian colonies receive their stock from the "Imperial Medical Central Station at Batavia."

The military pharmaceutical service, both in Holland and in its colonies, is performed in all important hospitals by military pharmacists. In the small hospitals the surgeon, assisted by hospital stewards, gives the simple medicines.

ALL MILITARY PHARMACISTS COMMISSIONED OFFICERS.

The military pharmacists in Holland and in the Dutch colonies without exception rank as officers and belong to the body of sanitary officers, which consists of surgeons, military pharmacists and military veterinary surgeons. All in all, the Dutch state has at its disposal with the army, the navy and the colonial troops 83 professional military pharmacists, comprised in the following classes:

PHARMACISTS IN THE LAND FORCES.

One directing pharmacist with the rank of a lieutenant-colonel, who is at the head of the Imperial Medical Central Station at Amsterdam; 18 pharmacists of the first class, three of whom have the rank of a major, the others that of a captain; ten pharmacists of the second class, with the rank of a first lieutenant. The pharmacists of the second class are promoted to the first class after ten years if there is a vacancy.

Thirty hospital stewards are also employed in the army.

THE NAVAL SERVICE.

Three pharmacists are employed in the navy—namely, one pharmacist of the first class with the rank of a captain, two pharmacists of the second class with the rank of a first lieutenant.

PHARMACISTS IN THE COLONIAL SERVICE.

The following pharmacists are on duty with the colonial troops in the Dutch East Indies: One directing pharmacist of the first class, with the rank of a lieutenant-colonel; one directing pharmacist of the second class, with the rank of a major; 15 pharmacists of the first class, with the rank of a captian; 31 pharmacists of the second class, with the rank of a first lieutenant.

Three pharmacists are employed in the West Indies—namely, two pharmacists of the first class, with the rank of a captain, in Surinam, and one pharmacist of the second class, with the rank of a first lieutenant, in Curacao.

PAY OF THE COLONIAL PHARMACISTS.

Since pharmacists of other nationality than Dutch can be and formerly were employed in Dutch East India, it may be interesting to learn the annual salaries of military pharmacists in Dutch East India. They are as follows: Directing pharmacist of the first class, 9,000 guilders, or about $3,600; directing pharmacist of the second class, 7,800 guilders, or about $3,120; pharmacists of the first class, 4,800 guilders, or about $1,920; pharmacists of the second class, 2,700 guilders, or about $1,080. To this is added a free dwelling or a compensation for such, which ranges between 500 and 2,000 guilders ($200 to $800), according to rank and the garrison at which the pharmacist happens to be stationed.

All Dutch military pharmacists enter service at once as first lieutenants, in consideration of the time spent in preparation for their duties.

The Major-General Inspector of the Medical Service of the Land Forces is at the head of the entire Dutch military sanitary system, and therefore also the highest authority of the military pharmacists. He is advised in technical matters by a pharmacist of the first class.

THE CENTRAL MEDICAL STATION AT AMSTERDAM.

Five pharmacists are employed in the Imperial Medical Central Station in Amsterdam—viz., one chief and four pharmacists of the first class.

The chief is the director of the Imperial Medical Central Station and is directly subordinate to the inspector. The four pharmacists of the first class are subordinated to the chief and are divided among the departments as follows: One is employed in the department of medicines and for making pharmaceutical preparations, one is employed in the hygienic-chemical laboratory and two are attached to the department of administration.

The remaining 23 pharmacists of the army furnish the pharmaceutical service in the garrison hospitals. Their immediate superior is the chief surgeon of the hospital.

THE CENTRAL STATION IN THE INDIES.

In Dutch East India the following pharmacists are employed in the Imperial Medical Central Station of Batavia: One directing pharmacist of the second class as chief, one pharmacist of the first class and one pharmacist of the second class.

In addition there is quite a large hygienic-chemical laboratory under the direction of a directing pharmacist of the first class, assisted by a pharmacist of the second class. The remaining 43 pharmacists are divided among the garrison hospitals. A surgeon with the rank of a colonel is at the head of military sanitary matters in Dutch East India.

THE NAVAL PHARMACISTS.

The three military pharmacists of the Dutch navy are employed in the harbor hospitals in Amsterdam, Hellevoetsluis and Willemsvord and they must perform the same duties that the military pharmacists perform in the garrison hospitals, besides fitting out the ships with stocks of medicine. They do not go on cruises. On shipboard the pharmaceutical duties are performed by the surgeons.

THE QUALIFICATIONS REQUIRED FOR THE SERVICE.

The military pharmacists of the navy and the army and those in the West Indies are not specially prepared for their duties. Ordinary pharmacists who have graduated and are well recommended, without further ceremony, receive appointments as pharmacists of the second class as soon as a vacancy occurs. As soon as they have entered the service they receive compensation for the expenses incurred by them while they were studying.

QUALIFICATIONS OF THE COLONIAL PHARMACISTS.

The pharmacists for the East Indies are prepared at Government expense in an institution in Utrecht, before they join the army. Civilian pharmacists are appointed to this service only when there is not a sufficient number of scholars to fill all places. Two scholars are taken into the institute every year. They there receive the same instruction and must pass the same examinations as civilian pharmacists. Till 1885 pharmacists who had not been able to met all the requirements demanded in Holland were sometimes employed in the East Indies. They always remained pharmacists of the second class unless they passed an examination to prove that they had the required knowledge of chemistry, botany and other sciences.

EDUCATIONAL REQUIREMENTS IN HOLLAND.

In Holland only one class of pharmacists is recognized legally at present. Graduation from a college, a "citizen school," of a "progymnasium" (lower kind of college or high school), or passing a literary and mathematical examination, is required as a preliminary to entering the profession.

The preparation for the profession begins with two years' practical experience in a pharmacy, closing with an examination. Then follows study for three or four years at a university. During this time four examinations must be passed—viz., first, an examination in natural science; second, an examination in pharmacognosy; third, an examination in theoretical pharmacy, and fourth, an examination in practical pharmacy.

When the fourth examination has been passed, a pharmaceutical diploma giving an unqualified right to manage a pharmacy is granted.

Just as in Belgium and in Italy, the chief stress of the entire pharmaceutical education is also in Holand put upon study at a university. In the examination the candidate must prove his practical ability by the compounding of prescriptions and pharmaceutical preparations; as for the rest, apart from the required two years' experience in a pharmacy, it remains with each one to obtain his practical knowledge when and where he can.

* Translated from the *Pharmaceutische Zeitung*, by Otto Hoffmann, A.B., under the direction of Dr. Geo. F. Payne, chairman of the Special Committee of the A. Ph. A. appointed at the Asheville meeting to work for the fuller recognition of pharmacists in the army and navy of the United States. The publication of the series was begun in this journal for September 10 and so far there have appeared descriptions of the position of the pharmacist in the German army (September 10), the German navy (September 25), the Austro-Hungarian service (October 10), the Italian service (October 25), the French service (November 25), the Russian service (December 10), the English service (December 25), the Swiss service (January 10) and the Belgian service (January 25).

Diiodcarbazol is a yellow crystalline substance which melts at 184 degrees C. It has been recommended as an antiseptic.

Chloroicdolipol is a chlorine substitution product of phenol creosote and guaiacol, which has been recommended by Zambelletti of Milan for inhalation in chronic affection of the air passages.

Iodophen is a name which has been given to a preparation apparently identical with nosophen, which has already been described in these columns. It has been used with good results in lieu of iodoform.

Chloralin is a new disinfectant and antiseptic which has been recommended in gynecology in 2 to 3 per cent. solution, and as a gargle in ½ to 1 per cent. solution. It is a liquid containing mono and tri chlororphenols.

Lentanin is an alkaloid obtained from the *Lentana brasilensis* which forms a white, odorless and very bitter powder almost insoluble in water but soluble in alcohol. It has been recommended in doses of 1 dram as a very energetic antiseptic.

Acokantherin is a glucoside obtained from *Acokanthera Schimperi*. It forms colorless crystals difficultly soluble in water and alcohol in the cold but very soluble when heated, and melting at 186 degrees C. According to Fraser and Tillie the pharmacological action of this body is not materially different from that of strophanthin.

To Remove the Odor of Iodoform.—Kontesch weller states (*Pharm. Centralh.*) that the odor of iodoform may be removed by washing in a solution of hexamethylenetetramin. This practically results in the formation of iodoformin, an odorless substance previously referred to in these columns.

Orphol is a name given to a combination containing 26.5 per cent. of betanaphtol and 23.5 per cent. bismuth. It occurs as a gray powder; weak aromatic taste. It has been highly recommended in the diarrhœa of tuberculosis by Nencki, Schubenko, Blackstein, Chaumier and others. The dose for children is from 2 to 5 grains, and for grown persons 5 to 10 grains daily.

Xylochloral is a combination of xylose with chloral, and is analogous to chloralose which, as has already been stated in these columns, is made by heating chloral hydrate with grape sugar. Xylochloral is obtained by heating xylose with chloral in the presence of hydrochloric acid. By recrystallizing in hot water xylochloral is obtained in scales which are easily soluble in water, and which melt at 132 degrees C.

A New Reagent for Hydrogen Peroxide.—A solution of anilin containing a little potassium bichromate was some time since recommended by Bach as a sensitive test for hydrogen peroxide. According to J. Von Jlosva, dimethylanilin, sulphanilic acid, ortho and para totuidin, xylidin and napththylamin all lend themselves to a similar use. The most sensitive is dimethylanilin, which is converted into methyl violet by solutions containing 1 part of hydrogen peroxide in 1,000. In more dilute solutions it is converted into a yellow coloring matter.

Pyrantin is a combination of paramidophnetol and succinic acid of the composition shown herewith:

$$\begin{matrix} CH_2-CO \\ CH_2-CO \end{matrix}\!\!>\!N-C_6H_4-OC_2H_5.$$

Chemically, it is paraethoxylphenyl succinimid. According to Piutti it occurs in colorless, almost insoluble crystals which melt at 155 C. *Soluble Pyrantin* is a sodium salt of the succinate and is a white, very soluble powder. It has been recommended as an antipyretic. The dose is stated to be from 1 to 3 gm.

Cacao Bougies.—It not unfrequently happens that a physician orders bougies with cacao butter without specifying the quantity of butter to be used. In such cases the following will prove useful (*Oesterr. Zeitsch. f. Pharm.*): For a bougie 10 ccm. long and 2 mm. thick 0 3 gm. of cacao butter is necessary. With a thickness of 3 mm. 0.7 gm. is required; with a thickness of 4 mm., 1.25 gm.; with 5 mm., 2 gm.; with 6 mm., 2.90 gm.; with 7 mm., 4 gm.; with 8 mm., 4.75 gm. With shorter bougies it is of course understood that a proportionately smaller amount of butter is required.

A New Reagent for Bromine and Iodine.—J. H. Kastle has found, in his investigations of halogen derivatives of sulphonamide, that the dichlor derivative of benzol sulphonamide, which is easily obtained by passing chlorine into a solution of benzol sulphonamid in 10 per cent. soda solution, is an excellent reagent for iodine and bromine By adding it to the solution of an iodide or bromide in the presence of carbon disulphide the salts are decomposed and the iodine or bromine derivative of the amide is formed, which colors carbon disulphide or chloroform just as would iodine or bromide itself. This reaction is quite as delicate as that in which the halogen is detected by chlorine water, and it has the advantage that the reagent remains unchanged on standing.

Ledum Camphor.—Hjelt publishes in the current number of the *Berichte* an account of the work carried on by himself, and, until his death, by Rizza. The figures of the analyses by both chemists agree with the formula $C_{15}H_{26}O$.

Calculated	C 81.44	H 11.71
Found (mean)	C 81.32	H 11.57

The boiling point method also confirmed this, the molecular weight being 222 and the mean found being 228. Ledum camphor is isomeric with patchouli and clove camphors, camphacol and other so-called sesquiterpene hydrates. Crystallized from alcohol, it forms long white needles, which have a peculiar odor. It melts at 104 degrees and boils at 283 degrees. It is fairly soluble in alcohol, in which solvent it is strongly dextrorotary $[a]_J = 7.98$. It is a strong poison. By heating with acetic anhydride, a sesquiterpene, $C_{15}H_{24}$, appears to be formed, which has been termed ledene.

Preservation of Thick Extracts.—Schacherl (*Oesterr. Zeitsch. f. Pharm.*) recommends the process suggested by Dr. Schacht, which consists in putting a few drops of glycerin on the surface of the extract in the container. Four drops of glycerin will be sufficient to preserve a large quantity of extract from drying out at a temperature of 24 to 27 degrees. This author recommends the process of Kremel for the preservation of the dried extracts. He uses, however, gum arabic instead of the milk sugar recommended by Kremel. He adds the thick solution containing the required quantity of the gum arabic to the extract previously evaporated down to a comparatively thick consistence; evaporates on a water bath and, if necessary, adds sufficient powdered gum to bring the whole up to the required weight. The whole when thoroughly dry is finally powdered, and the author claims that when so prepared the extract keeps a long time unaltered and without becoming lumpy.

New Derivatives of the Cinchona Alkaloids.—When quinine or conquinene. $C_9H_5(OCH_3)N.C_{10}H_{15}(OH)N$, or cinchonine or cinchonidine, $C_9H_6N.C_{10}H_{15}(OH)N$, are heated with PCl_5 in chloroform, the OH group in the alkaloids is easily replaced by Cl, and the resulting chloro-compounds yield up HCl to alcoholic potash, giving the well-known anhydro bases, quinene, conquinene, cinchene and cinchonidene, as they are sometimes most disadvantageously termed. It is now found that iron filings and sulphuric acid replaces the chlorine in the chloro-compounds by hydrogen, thus giving bases differing from the parent substance by one atom of oxygen—that is, in having had the hydroxyl replaced by hydrogen. Following the nomenclature of the benzoin derivatives, it is proposed to name the new bases as "desoxy" bases. Desoxy-cinchonine, $C_{19}H_{22}N_2$, is described as a crystalline body, melting at 90 to 92 degrees. It yields a platinum double salt, easily soluble in hot dilute HCl, and separating on cooling in reddish crystalline masses. It contains no water of crystallization. It corresponds to the formula $C_{19}H_{22}N_2 \cdot H_2PtCl_6$. The base itself is easily soluble in the ordinary organic solvents. It is dextrorotary. Desoxy-conquinine, $C_{20}H_{24}N_2O, H_2O$, is described as a crystalline compound, melting at 80 to 82 degrees. It yields a well defined crystalline hydrochloride. Very dilute solutions of the base in alcohol or tartaric acid show an intense, beautiful violet blue fluorescence. The alcoholic solution is strongly dextrorotary.

AMERICAN CHEMICAL SOCIETY.

THE CHEMISTRY OF CALYCANTHUS.

The regular monthly meeting of the New York Section of the American Chemical Society was held on Friday evening, February 7, in Professor Doremus' lecture room in the College of the City of New York.

Dr. Peter T. Austen, the chairman of the section, was unavoidably detained from the meeting, and his place was taken by Dr. McMurtrie. After the reading of the minutes of the previous meeting by Dr. Durand Woodman, Professor Hale announced that all members of standing committees had been re-elected by the council, that Dr. Dudley had been made president of the society, and that all other officers of the society had been re-elected.

CALYCANTHINE, A NEW ALKALOID.

Dr. R. G. Eccles read a most interesting and carefully prepared paper on "New Facts About Calycanthus." He told how this plant was considered as poisonous in Tennessee, where it is found, and gave some interesting histories about the work which he and Professor Harvey Wiley, chief chemist of the Department of Agriculture, had done. Professor Wiley thought that Dr. Eccles was mistaken in announcing that more than one alkaloid was contained in the seed, but later he confirmed Dr. Eccles' belief. The principal alkaloid, which is called calycanthine gives exceedingly distinct color tests. Its probable formula is $C_{17}H_{23}N_3O$. Its percentage composition was obtained from a large number of combustions, the results of which averaged, C, 71.56; N, 15.26; H, 8.34; O, 4.84. The specific gravity of calycanthine at 26 degrees C. is 1.455, and its melting point 219 C. This substance is remarkable in having the highest known specific rotary power of any organic body, which is plus 651.75; it crystallizes in simple trimetric octahedrons. These crystals were carefully measured and drawn by Professor Melville of the Geological Survey. Quinoline with a rotating power of plus 230.35 is the only alkaloid whose rotating power is near calycanthine.

Dr. Eccles said that during November, December, January and February he had devoted considerable time to studying this interesting substance and had isolated from the same source a new acid which seems to be related to citric and tartaric acids, but which reacts differently from either of these under tests, and which exhibits differences from all acids which he knows. He has also isolated two new alkaloids, one of which is crystalline and one amorphous; both exhibit a yellow to golden orange color when treated with nitric acid, while calycanthine under the same treatment turns bright green. The one which is crystalline is appropriately called glaucusine, from the species of plant from which taken, *Calycanthus glaucus*, (?) and the amorphus has been named sequatchine (?) from the county in Tennessee in which the calycanthus is found. He has also isolated three different alkaloids by decomposing calycanthine. One of these has salts, all of which are brilliant green, and this has been called thallecanthine; another gives salts which are bright yellow in color and which has been called chrysocanthine. No name has yet been assigned for the third.

From calycanthus three forms of albumen have been extracted. One of these coagulates like milk and forms lactic acid like milk. Dr. Eccles exhibited the other two scaled like pepsin. Calycanthus Starch gives a bluish to olive green color with iodine, and sugar is always present in the seeds. The doctor congratulated himself in having produced the most beautiful crystals ever made, because of the very high index of the refraction of calycanthine. They were indeed very brilliant and were far more beautiful than any diamond.

INCIDENTS OF THE CLEVELAND MEETING.

Prof. A. A. Breneman told many incidents of interest which occurred at the Cleveland meeting of the society. He said that there is scarcely a city in the country in which the feeling for chemists is so strong as it is in Cleveland. There the Chamber of Commerce welcomes the chemists to its meetings, and there, as in no other city, the manufacturers realize that it is to their interest to work in connection with the chemists. Cleveland is particularly strong in iron and oil industries. It is the center of the Lake Superior iron trade. The meeting was held in the Medical Department of the Western Reserve and the Hollenden Hotel was made the headquarters of the society. Over 100 persons registered, but this number of course included some camp followers; Dr. Breneman said that at least 85 were chemists who had come to Cleveland for the meeting. The speaker clearly explained that this gathering was a meeting of Western chemists, and said that only seven or eight of those present came from New York and the New England States. The younger members of the society were out in full force. Dr. Breneman said that he thought that Cleveland would soon have its own chapter of the Chemical Society, although some of the local men felt that it might be better for them to have a society of their own.

At the New York meeting, held previously a desire was shown for the society to make some standard scheme for the analysis of milk. At that time it was decided that it would not be then wise to undertake the setting up of standards. At the Cleveland meeting, however, Dr. Wolcott, director of the U. S. G. S., asked that a standard of analysis for coke and coal be adopted. A committee will shortly be appointed to undertake this work. He then told of the interesting excursions and valuable papers which were enjoyed by the delegates, and in his pleasing manner Dr. Breneman told of the things which interested him most.

THE NEW ILLUMINANT.

Dr. Durand Woodman gave a short, but very interesting display of the illuminating power of acetylene gas. He said that the great difficulty in manufacturing acetylene was that one had no control over the acetylene if the calcium carbide was put directly into water. The evolution of the gas, he said, was so rapid that it would blow water out of a battery jar. Dr. Woodman's scheme for controlling the evolution of the gas was a most simple one and one which can be tried on any lecture table. He had an ordinary piece of gas pipe a foot long, on one end of which was fastened a gas burner; through the other end of the pipe he put a mixture composed of about ½ ounce of calcium carbide and 3 ounces of sand and then covered the end of the pipe with a wire gauze. This pipe was placed in a glass cylinder and water gradually poured in; this caused an evolution of acetylene, which flowed through the jet at the top of the pipe, and was lit, giving a most brilliant flame. Dr. Woodman said that this apparatus was worked for about 10 minutes, and that the only attention which was required was the addition of water as the pressure within the pipe decreased.

This terminated the proceedings, and the meeting adjourned.

THE SOCIETY OF CHEMICAL INDUSTRY.

MEETING OF THE NEW YORK SECTION.

The February meeting of the New York Section of the Society of Chemical Industry was exceptionally well attended and proved one of the most interesting of any held recently. Alfred Hy. Mason had recovered sufficiently from his bronchial affection to preside, and H. Schweitzer, the honorary secretary, recorded the proceedings. The list of papers read included the following: By G. W. Thompson, "The Analysis of Alloys of Lead, Tin, Antimony and Copper;" by A. W. Warwick, "Laboratory Testing in Connection with Gold Milling;" by H. Van Hoevenbergh, "Petroleum Lamp with Automatic Lighting Arrangement;" by R. C. Schüpphaus, 1, "Modified Separatory Funnel;" 2, "An Extracting Apparatus adapted for the Analysis of Smokeless Powder."

Mr. Thompson's paper was one of great value to the metallurgist and provoked considerable discussion. It will probably be printed in full in the journal of the society.

Mr. Warwick's paper, which was read in the absence of the author by Chairman Mason, consisted of a *résumé* of the better known processes for the estimation of gold in mixed ores, and embodied a protest against the poor facilities which are given to chemists in the prosecution of their work at the milling stations. They were expected to conduct their assays and experiments in very restricted quarters as a rule, and their comfort or convenience was seldom consulted in the arrangement of their laboratories. The subject of gold ore assays was treated from the technical standpoint.

An ingenious application of electricity to the automatic lighting of petroleum lamps was shown by Mr. Hoevenbergh. This consisted of a dry battery connected by wires through the central draft of the lamp with a piece of spongy platinum held in contact with the wick. The battery, of small dimensions, is stored immediately below the oil reservoir and is operated by a push button attached to the outside of the reservoir. The lamp can be lighted 2,000 times before exhausting the battery.

Drawings and description of a new modified separatory funnel and an extraction apparatus were shown by the inventor, R. C. Schüpphaus. The novelty in the first-mentioned apparatus consisted of a two way cock connected with separate tubes. In the case of a fluid separating into two layers the lower layer can be conveniently passed out into a receiver with one turn of the two-way cock and the remainder conducted into a separate receptacle by a separate movement of the stop cock. The flask differed from similar ones in having a funnel-shaped mouth, which obviates the danger of spilling in filling it.

The extraction apparatus shown consisted of a modified Soxhlet, in which the air tube ran straight from the receiver to the upper condenser.

The meeting was brought to a close by

an interesting exhibit of photographs made with X rays. A number of the members had experimented with the new method of photographing invisible objects, and an interesting discussion resulted.

The meeting was preceded by the usual informal dinner, arranged for by Mr. Hartford, the chairman of the Chemical Industry Club.

Interesting Papers Read in Philadelphia.

The usual pharmaceutical meeting of the Philadelphia College of Pharmacy was held last Tuesday, with a good attendance of members and others. The programme was an interesting one, Charles H. La Wall, the assistant chemist of the Smith, Kline & French Company, being down for a paper on "The Shaddock or Grape Fruit, and Some of its Applications in Pharmacy;" Henry B. Gilpin, "Bitterless Cascara Sagrada," and J. H. Schroeder, on "The Use of Oxalic Acid in Preserving the Color of Plants." The papers were accompanied by specimens and photographs of special interest.

PREPARATIONS OF GRAPE FRUIT.

Mr. La Wall outlined the early history of the grape fruit, and said it must have been in the minds of some of the ancients, and probably existed in the Garden of Eden; but as the fruit was not a general favorite, he wondered how our first ancestor could have been led astray by it. The fruit was originally indigenous to a small part of Asia, and has been introduced in nearly all parts of the tropical world. Its medicinal and refrigerant qualities seemed, however, to be more highly appreciated in hot climates than in temperate zones. The fruit has been known to attain a large size, some specimens weighing as much as 15 pounds. In pharmacy there does not seem to be much application for the fruit, though many physicians claim a certain merit for the juice in dyspepsia and stomach troubles, and the bitter part of the fruit, which is perceptible throughout, is thought by namy to have great tonic properties. The author had prepared a syrup and a wine from it and samples of these were shown. The paper was a lengthy one, but full of interest.

FORMULA FOR BITTERLESS CASCARA.

Mr. Gilpin's paper on bitterless cascara embodied a formula and process for manufacturing a palatable preparation of the bark. The process was described at length, and we regret that the details reached us too late for insertion in this number. The formula is as follows:

	Grams
Cascara sagrada	500
Liquorice	110
Cloves	5
Calcined magnesia	10

OXALIC ACID TO PRESERVE PLANTS.

J. N. Schroeder, in an interesting paper, told how to preserve the colors of plants and flowers in a herbarium, and exhibited beautiful specimens over a year old as bright as the day they were mounted. The specimens are subjected to the action of a 3 per cent. solution of oxalic acid, some flowers requiring less and others more.

Wallace Proctor exhibited several specimens of the prepared anhydrous fats made by the Snyder Pharmacal Company of New York, and explained the process of manufacture.

Detection of the Newer Medicaments.

Professor Dragendorff and his assistants have carried out an extensive and exhaustive series of investigations as to the characteristics of a number of the newer additions to materia medica. The paper as published in the *Archiv der Pharmacie* embraces descriptions of the physical properties and therapeutic effects as well as the analytical reactions. We present herewith the continuation of an original translation of that portion of the paper which refers to the qualitative tests for the remedies named. This is in continuation of the installment which appeared on page 81 of the issue of February 10.

METHYL SALOL.

An alcoholic solution of methyl salol gives a violet color with ferric chloride. A mixture of methyl salol with sulphuric acid gives the following reaction: With nitric acid, orange (1 to 5,000). With potassium nitrite, a red brown, turning first to green and later to dark blue. With a trace of ammonia molybdate it turns blue (1 to 12,000). With Fröhde's reagent[1] it turns blue rapidly and changes to green (1 to 60,000). With vanadic-sulphuric . . . . it turns violet and then green (1 to 100,000). With potassium selenate it turns yellow and then green. With selenous acid this solution turns violet, turning to red brown on heating.

SALACETOL.

In alcoholic solution salacetol turns violet upon the addition of ferric chloride, and this color is restored on adding hydrochloric acid. In dilute soda solutions salacetol reduces Fehling's solution. A solution of salacetol in dilute sulphuric acid gives the following reactions: With potassium nitrate a carmine red (1 to 4,000). With ammonium molybdate it turns blue. With Fröhde's reagent it turns violet and then red (1 to 6,000). With vanadic sulphuric solution it turns green (1 to 100,000). With potassium bichromate it turns brown and then green. With resorcin the sulphuric acid solution turns orange (1 to 15,000).

SALOPHEN (ACETYL-PARA-AMIDO-PHENOL-SALICYLIC-ESTER.)

When boiled with sodium hydrate solution salyphen turns blue and then yellowish red; on being shaken the blue color is restored, and on adding potassium iodine it turns green. The solution turns blue when boiled with barium hydrate. An alcoholic solution gives a violet color with ferric chloride (1 to 150,000). On boiling with hydrochloric acid, cooling and adding a little phenol and calcium hypochlorite a red color is produced which turns blue on the addition of ammonia. An alcoholic solution on the addition of sulphuric acid, and boiling, gives off an odor of acetic ether. Salyphen makes a colorless solution with concentrated sulphuric acid, which turns to reddish brown on heating. The sulphuric acid solution turns green on the addition of potassium bichromate, and brown on the addition of potassium chromate.

SALOCOLL (PHENOCOLL SALICYLATE.)

A sulphuric acid solution of salocoll turns red on the addition of potassium nitrate, changing to orange and yellowish green; it turns red on addition of potassium nitrate; it turns orange, green and blue on addition of ammonium molybdate; it turns orange on addition of Frödhe's reagent, changing in one hour to green; with vanadic sulphuric acid it turns red, yellow, green and finally blue.

The addition of ferric chloride to an aqueous solution of phenocoll produces a characteristic salicylic acid reaction. On adding bromine water to an aqueous solution a white precipitate is formed, and on adding ammonia to the filtrate it turns brown. On adding phenol and potassium hydro hypochloride to an aqueous solution a violet color is produced, changing to green.

TOLYSAL (TOLYPYRIN SALICYLATE).

An aqueous solution gives the salicylic reaction the ferric chloride, but the color disappears on the addition of sulphuric acid. Mayer's reagent are mercuric chloride or tannin produce a precipitate with an aqueous solution. On heating with 25 per cent. nitric acid a wine red color is produced, changing to yellow on the addition of ammonia. (This reaction is the same as that of antipyrin.) On warming with nitric acid a blood red color is produced, which turns blue on evaporation. Antipyrin turns yellow. The residue from the evaporation turns yellow on the addition of ammonia, and brown red on the addition of sodium hydrate. With nitrious acid a green color is developed on adding two drops of nitric acid and arsenic oxide, changing to a blood red on the addition of fuming nitric acid (same reaction as antipyrin). With sulphuric acid and vanadic sulphuric acid tolysal turns olive green.

AGATHIN (SALICYLIC-ALDEHYDE-METHYL PHENYL-HYDRAZIN).

Agathin turns reddish yellow with sulphuric acid, and the sulphuric acid solution shows the following reactions: With a trace of nitric acid it turns blue and later green (1 to 20,000); with hydrogen peroxide (1 to 240,000) or potassium bichromate (1 to 400,000) it turns violet with resorcin or pyrogallol it turns orange; with thymol it turns purple (1 to 300,000); with ammonium uranate (1 dram plus 20 ccm. sulphuric acid) it turns blood red, changing on being warmed to greenish.

Agathin turns red on being heated with a solution of orcin in hydrochloric acid and orange on being heated with a solution chloroglucin in hydrochloric acid.

PYRODIN (HYDRACETIN, ACETLY-PHENYL-HYDRAZIN).

Pyrodin forms colorless needles melting at 128 to 129 degrees C. It dissolves in concentrated sulphuric acid, forming a colorless solution which turns pink on warming.

The sulphuric acid solution gives the following reactions: With one drop of ferric chloride solution it turns to a car-

[1] This reagent consists of a solution 0.1 gm. of ammonium vanadianate in 10 ccm. of concentrated sulphuric acid, the action is carried out in the same manner as with Fröhde's reagent.

mine red (0.001 gm. to 6 drops); with more ferric chloride it turns orange (1 to 30,000). It turns raspberry red on the addition of potassium bichromate or of nitric acid, while hydrogen peroxide, sodium peroxide and vanadic sulphuric acid[1] gives a somewhat more carmine-like color.

Chromic mixture[2] produces a similar color change, as does also ammonium sulph-uranate solution[3], and the same effect is produced by Lafon's selenic sulphuric acid[4] solution and by a mixture of 1 part of potassium seleniate with 140 parts of sulphuric acid.

Fröhde's reagent[5] dissolves pyrodin first with an orange color, which is turned into purple red by heating. Erdmann's reagent[6] produces an orange color, turning to red on the addition of ammonia (1 to 100,000). Millon's reagent[7] produces after some time a permanent blood red color. Chlorine water colors the sulphuric acid solution orange. Concentrated nitric acid dissolves pyrodin with an orange coloration (1 to 30,000). Liebermann's reagent[8] produces a beautiful purple red (1 to 20,000). Chlorinated water produces a reddish yellow precipitive in aqueous solutions of pyrodin. Phospomolybdic acid produces a blue color, chloride of gold a bluish green and violet color, the gold being reduced.

MALAKIN (SALICYL-ALDEHYDE-PARA-PHENETIDIN).

Malakin, or Malacin, as it is generally rendered in English, dissolves in concentrated acid with the production of a citron yellow color. By warming gently with nitric acid an orange color is produced which disappears upon further heating and reappears upon evaporation of the liquid. After boiling in hydrochloric acid the solution formed produces a ruby red color with one drop of chromic mixture[2] and a reddish violet color with ferric chloride. When the solution formed by the aid of heat with hydrochloric acid is cooled and filtered, the filtrate produces a violet precipitate with chlorinated lime. When dissolved in chromium water and evaporated slowly malacin leaves a violet residue which turns blue upon addition of sulphuric acid. In aqueous and alcoholic solution malacin is colored blue by ferric chloride.

[2] Chromic mixture. 0.02 gm. of potassium bichromate and 10 ccm. of water and 30 gm. of sulphuric acid.

[3] Ammonium sulph-uranate solution. 2 ccm. of concentrated sulphuric acid and 0.1 gm. of ammonium uranate.

[4] LAFON'S SELENIC SULPHURIC ACID.—1 part of sodium selenate (or tellurate) in 20 parts of concentrated sulphuric acid.

[5] FRÖHDE'S REAGENT FOR ALKALOIDS AND GLUCOSIDES.—Dissolve 0.005 gm. of sodium molybdate in 1 ccm. of concentrated sulphuric acid; or, according to some, 0.01 gm. of the salt in 1 ccm. of sulphuric acid; or, according to others, 0.01 gm. of the salt in 10 ccm. of the acid. The reagent should be prepared immediately before use and must be entirely colorless.

[6] ERDMANN'S REAGENT FOR ALKALOIDS.—Mix 6 drops of nitric acid, of 1.25 specific gravity, with 100 ccm. of water and add 10 drops of this mixture to 20 ccm. of pure concentrated sulphuric acid. According to other authorities dilute 10 drops of nitric acid of 1.185 specific gravity with 20 ccm. of water and add 20 drops of this mixture to 40 ccm. of pure concentrated sulphuric acid.

[7] MILTON'S REAGENT.—Dissolve 1 part of metallic mercury in 1 part of nitric acid (specific gravity 1.42). Dilute with twice its bulk of water, and after 24 hours filter.

[8] LIEBERMANN'S REAGENT. (NITROSYLSULPHURIC ACID).—Potassium nitrate, 5 parts concentrated sulphuric acid, 95 parts.

LACTOPHENINE (LACTOPHENACETINE).

Lactophenine dissolves in concentrated sulphuric acid without color, the solution turning red on the addition of nitric acid or potassium nitrate, and then orange; on addition of potassium nitrate it turns to a dark violet; on the addition of milk sugar it turns to blood red. On boiling 0.1 gm. of lactophenine with 1 ccm. of hydrochloric acid and diluting with 10 ccm. of water, filtering and cooling the solution, the addition of three drops of chromic mixture[2] produces a ruby red color (Ritsert's reaction for phenacetin). With a solution of phenol and some chloride of lime this hydrochloric acid solution turns red, and upon the addition of ammonia, blue (indophenol). On adding hydrogen peroxide the hydrochloric acid solution turns red, and on addition of ferric chloride to ruby red.

On boiling lactophenine with concentrated hydrochloric acid for one minute, neutralizing the mixture with ammonia and adding kaïrin and a trace of potassium nitrate a blue color is produced. When rubbed with nitric acid (0.3 gm. to 2 ccm.) lactophenine turns yellow. Dilute this mixture after one hour with water and a mass separates out which yields red crystals of orthonitrophenetidine when warmed with alcoholic solution of potassa and cooled. Bromine water produces no cloudiness in a 1 per cent. solution of lactophenine in hot water.

GALLANOL (GALLANILID.)

The alkalies ammonia or soda dissolve galland with the production of a brown or red color (1 to 300,000). When dissolved in concentrated sulphuric acid gallanol produces a blue color, turning with a small amount of ammonium molybdate to a dirty green (1 to 10,000), with Leibermann's reagent[8] orange (1 to 60,000), with concentrated nitric acid, yellow. In aqueous solution gallanol turns to dull red on the addition of chlorine water, changing to green on adding a small quantity of ammonia and reddish violet on addition of a larger quantity of ammonia. Chlorinated lime produces a brownish color in an aqueous solution, turning to red on the addition of ammonia. On adding chlorinated lime to an aqueous solution acidulated with hydrochloric acid a violet color is at once produced. Ferrous sulphate produces a dark blue color in aqueous solutions (1 to 20,000), ferric chloride a bluish black (1 to 40,000); phosphomolybdic acid, green, turning on addition of ammonia to deep blue (1 to 20,000), and ammonium vanadinate blue black. Potassium nitrate colors an aqueous solution yellow, turning to orange on heating and to wine red on addition of ammonia. Baryta water causes a green precipitate, the same as with gallic acid. Gallanol also reacts toward potassium cyanide in the same manner as does gallic acid.

ANALGEN (BENZALGENS, ORTHO-AETHOXY-ANA-MONOBENZOYLAMIDOCHINOLIN.)

Analgen produces a green solution with dilute sulphuric acid, the color being discharged on addition of ammonia, with the production of a white precipitate soluble in chloroform. Concentrated sulphuric acid dissolves analgen with the production of a yellow color, the analgen separating out as a yellow precipitate under the addition of water. Concentrated nitric acid also forms a yellow solution, turning orange on heating and leaving an orange red residue on evaporation. Lafon's selenic-sulphuric acid[4] dissolves analgen, forming a violet solution which turns reddish brown on the addition of water. The addition of water to a solution of analgen in varnadicin sulphuric acid[1] causes a green color, which turns to violet upon warming. When dissolved in chlorine water and the water evaporated off, a yellow residue is left. Ferric chloride colors an aqueous solution yellow, turning to brownish red on heating.

THERMODIN (ACETYL-PARA-AETHOXY-PHENYL-URETHANE)

Thermodin dissolves without color in concentrated sulphuric acid, the solution turning orange on the addition of nitric acid. Nitric acid produces a yellowish precipitate in a hydrochloric acid solution. Cane sugar produces a red violet color in the sulphuric acid solution. Leibermann's reagent dissolves thermodin with an orange red color. Fröhde's reagent dissolves it first without color, then yellow turning to violet (1 to 40,000). In the latter mixture color rings are formed later of yellow, green and other colors. Vanadic sulphuric acid turns a solution in concentrated sulphuric acid at first to a light green and later to a dark green. Furfurol water turns a sulphuric acid solution yellow.

NEURODIN (ACETYL-PARA-OXYPHENYL-URETHANE.

Neurodin produces no characteristic color with sulphuric acid. On addition of nitric acid it turns orange, as does thermodin, but in addition the sulphuric acid solution shows green and red streaks (1 to 10,000). Potassium nitrate produces green and violet streaks, and later a brown color (1 to 10,000). Furfurol produces a yellowish color. Neurodin is colored yellow in mixing with 1 part of potassium seleniate and 140 parts of concentrated sulphuric acid, but the solution turns green and blue on warming, and finally to an olive green (1 to 20,000). The reactions toward vanadic sulphuric acid and Fröhde's reagent are the same as those of thermodin.

SYMPHOROLS.[9]

All three symphorols occur in colorless crystals, the lithium and strontium salts are easily soluble and the sodium salt more difficultly soluble in water. On agitating with benzol a cold aqueous solution to which a small quantity of concentrated sulphuric acid has been added caffeine goes into the solution in benzol and may be recognized by the ordinary caffeine tests. Without the addition of sulphuric acid the symphorols are not taken up by benzol from aqueous solutions, and caffeo-sulphonic acid itself is taken up only with difficulty. In order to recognize symphorol in the presence of caffeine agitate the aqueous solution with benzol when the free caffeine will be obtained in the well known needle shaped crystals, then boil the aqueous solution adding hydrochloric acid and again shake out with benzol. If any caffeine is now obtained it can be stated that it had been produced by the decomposition of the caffeo sulphuric acid. The symphorols resemble caffeine in that the residue left after evaporating solutions of them in chlorine water or in nitric acid, gives the murexid reaction with very dilute ammonia (1 to 120,000). They differ from

[9] There are three symphorols; that known as N being the natrium (sodium), salt, the L being the lithium salt and the S being the strontium salt of caffeo-sulphonic acid.

caffeine, in addition to the difference already given, in that the aqueous solution of symphorols are not precipitated by mercuric chloride, mercuric cyanide, platinum chloride and silver nitrate.

A Water Bath for Making Ointment of Zinc Oxide.

At a recent meeting of the Kings County, N. Y., Pharmaceutical Society, which is reported in our news columns, W. C. Alpers of Bayonne, N. J., described a water bath which he uses for melting and bottling petrolatum ointments.

The bath consists of two cylindrical tin cans, the inner having a capacity of about a quart and being provided with a cover. The inner can is suspended by means of tin straps at the top in the center of the outer can, with a space of about ½ or ¾ inch all around between the sides and the bottoms of the two cans. The inner can, which contains the ointment or oil, is fitted with an outlet tube at one side and at the bottom of the can, and this tube passes though the outer can and is provided with a stop cock.

Mr. Alpers stated that he had found the can very useful in bottling all kinds of ointments, and also in bottling castor oil during cold weather. He had furthermore found it to be of service in preparing oxide of zinc ointment. For this purpose he first triturated the oxide of zinc to a smooth paste with a small quantity of lard oil. He then placed in the water bath the requisite amounts of benzoinated lard, to which he added a little wax to compensate for the oil used in making the paste, and applied heat until the whole was melted. This he allowed to run in a small stream into the mortar containing the zinc paste, stirring constantly until the whole was mixed to a uniform consistence. By a proper adjustment of the temperature and of the rate of flow the ointment will be stiff enough to leave alone by the time the last of the melted lard is incorporated.

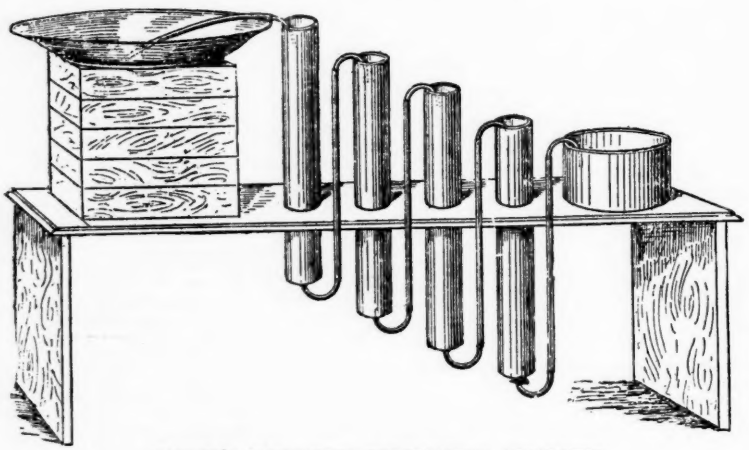
Acetylene Only Slightly Poisonous.—From experiments made by M. Brociner on the poisonous properties of acetylene he finds that it is only very slightly poisonous, no more so than the ordinary carbides of hydrogen such as formene, ethylene and propylene. Animals subjected to mixtures containing large doses of acetylene did not succumb, even at the end of several hours, where care was taken to use enough oxygen and to renew the mixture of gas so as to provide against the product of the animal's own respiration. Blood will dissolve about 80 per cent. of its volume of acetylene. If the latter does combine with hemoglobin the combination is very unstable and not to be compared to that formed by hemoglobin with carbonic oxide.

Silvering Mirrors.—A method of silvering mirrors has recently been patented by M. Hans Boas, of Kiel. It is based on the fact that when one of the heavy metals forms the cathode of a vacuum tube containing a trace of hydrogen, this metal is volatilized by the current, and is deposited as a firmly adherent and highly polished layer on the walls of the tube. The mirror thus produced is said to be of much greater brilliancy than can be obtained by the methods commonly employed.

A Convenient Arrangement for Continuous Percolation.*

By J. A. Forret.

Such preparations as fluid extracts and concentrated infusions are now very generally prepared by continuous percolation. When a portion of the drug has been macerated, it is transferred to percolators and exhausted by passing water slowly through the percolators. The fluid which is displaced from the first percolator is transferred to the second, and so on, and the second portion of the drug is macerated in that which passes through the last of the series. The second portion is percolated in the same way, that which passes through the last percolator being used to macerate the third portion. Without some arrangement whereby the fluid may traverse the entire series automatically, the process requires constant attention. When the percolators are placed in line with each other vertically, and the percolate is allowed to drop from one to another, there is no convenient means of adjusting the flow so as to guard against one or more of the percolators passing the percolate more rapidly than they are supplied with the liquid.



FORRET'S CONTINUOUS PERCOLATION APPARATUS.

The drawing indicates an arrangement by which percolation may be effected through a series of percolators with very little attention. The percolators cannot overflow, nor can the percolate fall below the surface of the marc. With the first portion of drug, the basin, of course, contains water which is supplied to the first percolator by a siphon. The fluid from the last percolator drops into a vessel containing the second portion of drug. When the contents of the first percolator are exhausted, the basin may be lowered by removing one or more of the blocks, the siphon transferred to the second percolator, and so on.

When a sufficiency of percolate has passed through the last percolator to soak the next portion of the drug, the remainder, if any, is passed through the first percolator containing that portion, and exhaustion completed by water.

The support is a stout wooden box laid on its side ; on the top are circular holes to receive the percolators, which are fixed at the required hight by small wooden wedges.

The percolators I have in use are the tins in which platinotype paper is sent out ; they are 21 inches long, with a diameter of 3 inches. The bottom is pierced and a short length of metal tube soldered into the hole. A piece of rubber tubing of suitable length is attached to the metal tube, and the other end of the rubber tubing carries a piece of bent glass tubing, by which it hangs from the top of the percolator next in the series.

To prevent choking a perforated circular piece of tin, saucer shaped, is placed in the bottom of the percolator with its concave side downward, and above this a layer of tow or other suitable material.

* Read at a recent meeting of the North British branch of the Pharmaceutical Society of Great Britain.

The Qualitative Examination of Acetanilid.*

By Charles Platt.

In view of the deficiency in the analytical literature of the acid anilids the following tests may prove of interest.

The formation of acetanilid, or phenylacetamid, $C_6H_5NHC_2H_3O$, from anilin and glacial acetic acid, $C_6H_5NH_2 + C_2H_3O.OH = C_6H_5NHC_2H_3O + H_2O$, and the corresponding formation from anilin and acetyl chloride, $C_6H_5NH_2 + C_2H_3OCl = C_6H_5NHC_2H_3O + HCl$, suggest the adaptability of various color reactions with the acids and alkalies. The pyhsical constants have been determined and the decomposition of the anilid made to serve for its identification.

Acetanilid is a white crystalline powder neutral in reaction and tasteless, but producing a slight burning sensation when placed upon the tongue. Examined under the microscope it is found to be made up of broken crystalline plates. The melting point, commonly given as 113 to 114 degrees, is determined by the writer as fairly constant at 112 degrees. Heated on platinum, acetanilid volatizes without leaving a residue, and, when ignited, it burns completely with a yellow flame. At 15 degrees it is soluble in about 190 parts of water and in 5 parts of alcohol. It is soluble in 18 parts of boiling water and in about 5 10 part of boiling alcohol. It is soluble in the cold in ether, chloroform, acetic acid, nitric and sulphuric acids, and, when warmed, in hydrochloric

* *Journal* of the American Chemical Society.

acid. On boiling with water, oil like globules separate out, and the solution on cooling recrystallizes in large but delicate six-sided plates.

Reaction with Concentrated Nitric Acid.—Acetanilid is easily soluble in strong nitric acid, the solution being colorless in the cold but turning to a yellow, then brownish red, on gentle warming, nitrogen oxides being at the same time evolved. The colorless solution on standing in the cold gradually acquires a light green tint, but finally changes, through yellow, to red, with formation of red acicular crystals. This red solution gives off the odor of nitrobenzene. A similar appearance and odor are produced by evaporating nitric acid solutions, an oily residue of decided odor being produced by rapid evaporation, a crystalline residue of slight odor by slow evaporation. The nitric acid solution has been described by one writer as colorless, by another as brown, then blue, then colorless.

Reaction with Dilute Nitric Acid.—The acetanilid is slowly soluble in the cold, and without change in color, but with separation of oil-like globules. This solution on slow evaporation gives a brown residue with slight purplish tint. By boiling with dilute nitric acid a colorless solution is obtained, with evolution of pungent fumes.

Reaction with Concentrated Sulphuric Acid.—A colorless solution is formed, unaffected by heating to boiling. The solution in cold concentrated acid, on long standing, acquires a pink to brown color. With an excess of the acetanilid the pink coloration develops quickly, is well marked, and changes gradually to an orange by reflected light. As a final change tufts of delicate acicular crystals appear and the solution gradually becomes colorless.

Reaction with Sulphuric Acid and Potassium Chromate.—A solution in concentrated sulphuric acid is turned to a dark green on addition of a few drops of potassium chromate. A solution in concentrated sulphuric acid, subsequently diluted, gives no reaction at first with the potassium chromate, but on standing is gradually turned to a reddish brown, and finally to a dark olive green. A similar reaction to the last is produced by addition of the chromate to a solution in cold dilute acid.

Reaction with Hydrochloric Acid.—The acetanilid easily dissolves in hydrochloric acid when warmed, and no precipitate is produced by subsequent dilution with water.

With hydrochloric acid and potassium dichromate there is no well marked reaction.

Reaction with Hydrochloric Acid and Potassium Permanganate. — An olive green coloration is obtained by adding a small crystal of the potassium permanganate to the solution in hydrochloric acid. On standing the color is changed to a mahogany brown.

Reaction with Hydrochloric Acid and Chromic Acid.—A solution of acetanilid in hydrochloric acid, diluted, and treated with a weak solution of chromic acid gives a yellowish green coloration, which gradually turns to a dark green. Potassium hydroxide produces a blue precipitate in this solution.

Reaction with Hydrochloric Acid and Bromine.—Bromine water added in excess to a solution in hydrochloric acid produces a heavy yellow to white precipitate of the monobrom derivative of anilin. This precipitate, examined microscopically, is found to be made up of a fine interlacing network of needles or fiber-like crystals. A similar precipitate is obtained by means of bromine water in a water solution of the acetanilid.

Reaction with Hydrochloric Acid and Chlorine.—Chlorine water added to a solution in hydrochloric acid gives a dark blue coloration which afterward fades. A similar reaction is obtained by substituting for the chlorine water a fitered solution of bleaching powder.

Mercuric chloride added to the hydrochloric acid solution gives no precipitate.

Dissolve some of the powder in a little hydrochloric acid and add, first, a few cubic centimeters of 5 per cent. phenol, then a little clear saturated solution of chlorinated soda or lime. The solution acquires a brownish red color, turning to a blue on addition of ammonium hydroxide in excess.

Reaction with Potassium Hydroxide.—By heating some of the powder with potassium or sodium hydroxide the characteristic odor of anilin is developed.

Reaction with Potassium Hydroxide and Chloroform.—By heating with potassium or sodium hydroxide and a few drops of chloroform the characteristic odor of an isonitrile is developed, phenylisocyanide being formed.

Reaction with Sodium Nitrate and Sulphuric Acid.—The powder mixed with sodium nitrate and sprinkled upon concentrated sulphuric acid produces a fine red coloration.

Reaction with Ferric Chloride.—A cold saturated water solution added to neutral ferric chloride produces no change in color.

Reaction with Zinc Chloride.—Acetanilid heated to 270 degrees with an equal weight of zinc chloride produces, first, orthoamidoacetophenone, in small amount, and then flavanilin, $C_8H_{14}N_2$, a yellow substance with a green fluorescence, a derivative of quinolin. It is stated in a number of text books that acetanilid boiled with zinc chloride anilin and acetic acid will produce amidoacetophenone, $C_6H_4NH_2C_2H_3O$, but this test is untrustworthy, inasmuch as the reagents used will produce this substance in absence of acetanilid. The paramidoacetophenone produced is crystalline in nature, while the ortho derivative formed in the previous test by heating zinc chloride and acetanilid is a yellow oil of high boiling point and with a characteristic sweetish odor.

Reaction with Plugge's Reagent.—Boil the acetanilid with water, cool and filter off if necessary, then boil again with potassium nitrite and dilute nitric acid Mix with Plugge's reagent, a solution of mercurous nitrate with a little nitrous acid, and again heat to boiling. A deep red color is developed.

Antipyrin and phenacetin, two other popular antipyretics much used in medicine, may be readily distinguished from acetanilid by the foregoing tests. Antipyrin, for instance, with ferric chloride gives a deep red coloration and is precipitated from its solutions by mercuric chloride. It has approximately the same melting point as acetanilid, but, unlike the latter, is decomposed by further heating. The characteristic reactions for phenacetin have been given by the writer in a former article.*

Comparative tests have been made upon various samples of acetanilid of domestic and foreign manufacture. The products of reputable houses seem to be practically identical with the exception of difference in perfection of crystallization and a corresponding difference in appearance.

* *J. Anal. Appl. Chem.*, 7, 2.

The Examination of Creosote Capsules.

The necessity of examining the contents of the various ready-made capsules on the market has frequently been dwelt upon, and such examination frequently shows very wide differences between the contents of the capsules and the statements as to the contents which appear on the labels. The following method of examining capsules containing creosote which was recently suggested by Sapin (*Rep. de pharm.*) will therefore prove of considerable interest:

Macerate 50 of the capsules of examination for several hours in barely sufficient cold water to cover them, and then heat carefully until the gelatin is dissolved. On cooling there will be two layers, the upper being oily and the lower gelatinous. Dissolve the oily layer in 25 ccm. of ether; again liquify the gelatinous mass by careful heating and allow it to cool, when the last traces of the oily creosote solution will rise to the surface and may be removed by a second portion of ether. By mixing the two etheral solutions, evaporating and weighing the residue the weight of the creosote present in the capsule and of the oil will be obtained. To separate these two, shake the residue twice with 10 ccm. of alcohol (94 per cent.), which dissolves the creosote while the oil remains behind. After pouring off the alcohol, heat the oil until the last traces of alcohol are driven off and weigh it. The difference between the figures thus given and the total weight of the residue after the evaporation of the ether will give the quantity of the creosote present.

This method is available for analysis of creosote solutions in oil, such as cod liver oil, almond oil, peanut oil and olive oil. The quantity of creosote found may occasionally be a little in excess of the actual amount present on account of the slight solubility in alcohol of some of the oils used.

Hard Rubber Out of Sawdust.

A German patent has recently been taken out on the production of an imitation of hard rubber out of sawdust, which consists in mixing sawdust with chromatized glue, forming the object out of this mass by pressure between wooden or metal forms, then placing it in heated oil, varnish or tar until all the moisture is driven out of the sawdust. The article is then placed in a drying oven, where it is heated to between 400 and 600 degrees F., where it soon takes on the appearance and properties of hard rubber. Sawdust of resinous woods are particularly adapted for this imitation. It is interesting to note in this connection that while our Western rivers were once almost choked with the sawdust from the sawmills, since the introduction of the thin band saw trouble in disposing of sawdust has become quite rare.

STYPTIC TAMPONS FOR OBSTINATE NOSE BLEED.

Tannin	25 grains
Benzoic acid	25 grains
Carbolic acid	25 grains
Collodion, flexile	1 fl. ounce

Impregnate absorbent cotton with this styptic and plug with it the posterior nares.—*Rougier.*

A Comparison of the More Recent Methods for the Assay of Cinchona Bark.*

By Lyman F. Kebler, B.S.,

Philadelphia, Pa.

No less an authority than Dr. Fr. Hoffmann, in a review of a recent text-book of pharmacy, commented on its omissions as follows: "Among the latter (omissions) may be mentioned the desirable introduction of a chapter on the valuation or estimation of alkaloidal galenical preparations, a subject of constantly increasing importance in manufacturing and dispensing pharmacy. Although still in a state of evolution and imperfection, several methods of considerable value for the identification and estimation of drugs, as well as their fluid extracts and tinctures, have been established during recent years. The importance of the application of pharmaceutical research in this direction, and the valuation of the therapeutical constants of important plant remedies, is now of such a recognized prominence that it is one of the foremost problems in pharmacy."

ASSAY OF CINCHONA.

In selecting a method for assaying cinchona bark due consideration must be given to the kind of information desired. While the pharmacist does not require as elaborate a method for standardizing his preparations as the manufacturer of quinine in selecting his barks, yet he ought to be in possession of a process that yields no less accurate and satisfactory results in a comparatively short time.

The methods considered most efficient and practicable for extracting the alkaloids both from the bark and its galenical preparations may be classed as follows:

1. The powdered bark or its preparations are macerated with ether and ammonia water, or a mixture of chloroform, ether and ammonia water, and an aliquot part taken for analysis. Schweissinger-Sarnow,[1] Keller[2] and the author.[3]

2. The powdered bark or its preparations are macerated with a mixture of chloroform or ether, or a mixture of both in conjunction with alcohol and ammonia water, and an aliquot part taken for analysis. Prollius,[4] De Vrij[5], Lyons,[6] Haubensak,[7] Kürsteiner[8] and U. S. P., 1890.

Table I is given to show at a glance how closely some of the extractive solvents of the various methods approximate one another.

The time required for the execution of the several processes varied from six to 24 hours, unless stubborn emulsions were encountered, as is not infrequently the case with several of the above processes.

PROLLIUS' METHOD.

The introduction of Prollius' method marks a new era in drug assaying. This method contains the germ from which have sprung nearly all of the most valuable methods of recent date. Prollius proposed to employ an ethereal solvent for estimating the ether-soluble alkaloids, and a chloroformic mixture for extracting the total cinchona alkaloids. It was originally designed for determining the alkaloidal value of cinchona bark, but the various modifications proposed now make it possible to apply the process to a large number of narcotic drugs and their preparations. At first it was deemed essential to macerate the drug 24 hours, but experiments have proven that four hours, with a fine powder, is ample time. In this work, maceration for all methods, with the bark, was continued about four hours, with repeated agitation.

The fluid extracts were prepared as follows: Fluid extract No. 1: 100 gm. of the drug were macerated three days with a menstruum composed of alcohol two parts, glycerin and water each one part; the percolation was then allowed to proceed, gradually adding of the above mixture until 150 ccm. of the percolate were obtained. Fluid extract No. 2 was prepared in the same way as the above except that the U. S. P. menstruum was employed. Fluid extract cinchona calisaya was prepared on a large scale. The fluid extracts were prepared from the respective barks assayed below.

With the processes involving the extraction of the alkaloids by means of immiscible solvents, the fluid extracts were diluted with an equal weight of water, then treated directly with the solvents for one hour, with frequent agitation, and an aliquot part taken for analysis. Fluid extracts Nos. 1 and 2 were only two-thirds normal strength, but the per cent. of the alkaloids is based on a normal extract. Under these conditions the results obtained are given in Table II.

The results indicate that the methods which evaporate an aliquot part of the extractive solvent, then extract the partly dried residue with dilute sulphuric acid, and subsequently shake out the alkaloids, do not yield the full amount of the active constituents. This is undoubtedly due to the presence of the gummy extractive matter, which when treated as above agglutinates into small particles that envelope the alkaloids. These small particles being insoluble in the menstruum employed, makes it impossible to recover the alkaloids so occluded. In connection with the sulphuric acid, Dr. A. B. Lyons employs ether, which appears to facilitate the extraction somewhat.

The writer has frequently treated the gummy residue with an undue amount of water, but the filtrate, when tested for alkaloids, always responded affirmatively. In view of this fact, the following experiment was made: the gummy residue was washed with water until the filtrate was only slightly acid to litmus paper; this required about 180 ccm. The filtrate was now collected in a graduated cylinder. After the first 100 ccm. were obtained, the issuing filtrate was tested by both Wagner's and Mayer's reagents; both gave heavy precipitates. The residue was now treated with a few drops of dilute

TABLE I.—TABULAR VIEW OF THE AGENTS EMPLOYED IN EXTRACTING THE ALKALOIDS, ETC.

Process.	Cinchona bark.	Alcohol.	Chloroform.	Ether.	NH_4OH 10 per cent.	Amount of menstr. taken per assay.	Color of alkaloids.
U. S. P., 1890	20 gm.	152 ccm.	40 ccm.	.....	8 ccm.	100 ccm.	Chocolate.
Prollius	20 gm.	20 gm.	.....	170 gm.	10 ccm.	120 gm.	Chocolate.
Lyons Nos. 1 and 2[1].	20 gm.	13.8 ccm.	.....	180.7 ccm	5.5[5] ccm.	100 ccm.	No. 1 chocolate. No. 2 nearly white.
Lyons Nos. 1 and 2[2].	20 gm.	13.7 ccm.	43.9 ccm.	137 ccm.	5.4[5] ccm.	100 ccm.	No. 1 chocolate. No. 2 nearly white.
Haubensak	20 gm.	20 ccm.	.....	170 ccm.	10 ccm.	100 ccm.	Nearly white.
Haubensak and Kürsteiner[3]	20 gm.	30 gm.	.....	170 gm.	15 ccm.	100 gm.	Nearly white.
Haubensak and Keller	12 gm.	.....	.....	120 gm.	10 ccm.	100 gm.	Yellowish white.
Chloroform-ether[4].	20 gm.	.....	50 gm.	150 gm.	20 ccm.	100 gm.	Whiter than any other process.

[1] Prollius' mixture.
[2] Prollius' fluid modified.
[3] Moistens the drug first with 5 gm. of 12.19 per cent. hydrochloric acid.
[4] The method as used by the writer for several years and applied to the various drugs and their preparations. Mr. Keller has recently published a process for assaying cinchona bark that approximates this one very closely. Schweiz. Wochenschr f. Chem. u. Pharm., through the Pharm. Era (1896), 15, 78.
[5] Strong ammonia water.

TABLE II.

Process.	Per cent. of alkaloids in cinchona calisaya.				Per cent. alkaloids in fluid extract cinchona calisaya.		
	1	2	3	Average	1	2	Average.
U.S.P., 1890	8.20	7.99	8.20	8.13	5.80	6.00	5.90
Chloroform-ether	9.57	9.31	9.40	9.42	6.41	6.39	6.40

Process.	Per cent. of alkaloids in cinchona rubra.	Per cent of alkaloids in fluid extract cinchona rubra No. I.	Per cent. of alkaloids in fluid extract cinchona rubra No. II.
U. S. P., 1890	4.57	2.43	....
Prollius	4.56	2.57	....
Lyons, No. 1[1]	4.79	2.49	....
Lyons, No. 2[1]	5.73	3.39	3.89
Lyons, No. 1[2]	4.97	....	....
Lyons, No. 2[2]	5.81	3.51	3.93
Haubensak	5.96	3.43	3.97
Haubensak and Kürsteiner	5.90	3.59	....
Haubensak and Keller	5.27	3.61	....
Chloroform-ether	5.77	3.50	4.07

[1] Prollius' mixture. [2] Prollius' fluid, modified.

* Read at a meeting of the Philadelphia College of Pharmacy.

[1] 1890, Pharm. Centralhalle, *31*, 771.
[2] 1892, Schweiz. Wochenschr. f. Chem. u. Pharm., *30*, 501, 509; Am. J. Pharm., *65*, 78. 1893, Ztschr. Oesterreich. Apotheker, *47*, 563, 586; Am. J. Pharm., *66*, 42.
[3] 1895, Am. J. Pharm., *67*, 499; J. Am. Chem. Soc., *17*, 822.
[4] 1881, Arch. d. Pharm., *209*, 85, 572; Am. J. Pharm., *54*, 59.
[5] 1882, Neder. Tijdschr. de Pharm., January; Am. J. Pharm., *54*, 290.
[6] 1884, Druggists' Circular, *28*, 114; Pharmaceutical Assay, § 13, 14, 29-36, 127, 128.
[7] 1891, Schweiz. Wochenschr. f. Pharm., *29*, 147; Am. J. Pharm., *63*, 347.
[8] 1892, Schweiz. Wochenschr. f. Chem. u. Pharm., *30*, 473; Pharm. Ztg., *37*, 750; Am. J. Pharm., *65*, 71.

sulphuric acid, the particles disintegrated, with a stirring rod, as much as possible, and washed with water until a second 100 ccm. were obtained. The filtrate was again tested as above, with the same results. The above operation was continued until 500 ccm. were obtained, testing the filtrate at intervals of 100 ccm. After 500 ccm. had passed the filtrate still gave a turbidity with both of the above reagents. These results demonstrated to the writer that it was practically impossible to obtain all of the alkaloids by the methods embodying the above procedure.

Another difficulty inherent in these methods is the proneness of the immiscible solvents to emulsify, and the slowness of separation. This is undoubtedly due to the mechanical action of the particles thrown out of solution on rendering the latter alkaline. It was necessary to discard several assays in this work on account of this objectionable feature.

THE U. S. P. METHOD.

According to the U. S. P. process, we are to obtain 150 ccm. of the extracting menstruum, after treating the bark; but the writer's experience has been that only about 140 ccm. are obtained. The other 10 ccm. are only obtainable by applying pressure to the bark on the funnel, which is objectionable, if not detrimental.

The method of Prollius yields impure alkaloids and possesses several undesirable features.

SATISFACTORY METHODS OF ASSAY.

The methods that have proven quite satisfactory are those in which the immiscible extractive solvents are directly shaken out with acidulated water. Kürsteiner's modification of Haubensak's method does not appear to possess any advantage over the original process. Keller's modification of the same process must be considered of secondary importance, although very good, from the fact that Mr Keller has published a second and better method for the same drug. After eliminating the above processes, we have left three methods that leave very little to be desired—viz.: Lyons' general process No. 2 with Prollius' mixture, Haubensak's, and the chloroform-ether process. With the bark these methods varied from one another only 0.2 per cent., while with the fluid extracts there was even less variation. The color of the alkaloids of these methods is also very good. Those obtained by Lyons' and Haubensak's methods possess a slight chocolate color, while those obtained by the chloroform-ether process are more nearly white.

In conclusion, it is only necessary to say that while the author favors the chloroform ether process, he cannot consider it superior to the methods of Lyons and Haubensak to any extent.

A Novel Magnesium Light.

Magnesium powder is placed between two thin impenetrable sheets of paper which are coated with paste. They are then stuck together. After drying, a sheet of paper impregnated with potassium chlorate is placed on each side of the package. For an envelope a wider sheet of paper is pasted about the packet so that the whole forms a thick leaf of paper, which can be cut with a scissors into strips. To produce the light one of the strips is held in a tongs and ignited, when it burns with a brilliant magnesium light. The magnesium paper prepared in this way is claimed to be durable and entirely free from danger.

The Use of Drugs.*

BY W. R. GOWERS, M.D., LOND., F.R.S.

The physician's experience of the use of drugs is acquired under conditions not altogether favorable. It is his task to deal with cases that have resisted the efforts of practitioners who are often wise, persevering and equipped with knowledge in a degree increasingly adequate and effective. Success in treatment by drugs after such antecedent efforts seems to me to testify to the undeveloped capacities in the means employed. However this may be, I am convinced that the method of treatment to which the average practitioner is chiefly restricted now, as he was in the past, to which he is limited by a compulsion not less at the present time than in former days, has not only a power that can be realized now, but also a potentiality yet to be developed.

It has therefore been with great interest that I have seemed of late to see more clearly why this should be. When I say "I have seemed to see it," I do not mean that it is not conspicuous to many. The skepticism regarding the use of drugs to which I have referred is, I think, less now than a few years ago. One favorite foothold was the statistical demonstration of inutility—as, for instance, that the average duration of acute rheumatism was the same whatever treatment was employed or when no agents were used. That is no longer possible, since we have sought help from the willow which casts its shadow on the damp places in which there thrive the bane and antidote. Since the salicylates were employed I fancy the significance of the loss of this convenient argument has been felt. Then, moreover, the empirical advice, "Try all things; hold fast that which is good," to which in the hands of peasants we owe many of our most precious aids, has been applied to the results of modern chemistry, and every tangible achievement of science has been seized by the "advanced pharmacy" of the present day.

THE POTENCY OF DRUGS.

But can we discern the reason why drugs are useful? Consider. I show you two tubes. Each contains a small quantity of a white powder—about half a teaspoonful. Each consists of the same elements. One is practically harmless; the other contains within it the power of death to 1,000 men. The one is quinine; the other is aconitine—the alkaloid which makes so deadly the plant whose flower our ancestors called "monkshood" in the far-off days when the original was always before their eyes. It is an almost startling fact that in this minute quantity of powder, hardly visible to those at a distance, there is such a potentiality of death. Picture to yourselves 1,000 men. That which is in this tube would end the life of every one of them. There is a latent power within this powder beside which the lightning flash is feeble, and to which the earthquake might give place, so far as the comparison depends on lethal certainty. But the resemblance in the aspect of these two substances is not all. As I said, each consists of the same elements; each is made up of carbon, nitrogen, oxygen and hydrogen. Each consists of the elements which compose air and water, with some carbon added—soot, if you like. Why is one almost harmless, and the other a most deadly poison? I might have chosen for the lower term of thecomparison a simple food, but then the amount of nitrogen would have been less, and the resemblance in construction less lose. The answer may be given, "It depends upon the chemical constitution." True, but this takes us a very little way. When we discern that the difference depends upon the way in which the atoms of the elements are arranged in molecules, and the molecules are grouped together, we are no nearer an explanation. We see a little more, however, when we realize that chemical constitution means that energy is held "latent" (as it is said) ready to be released when the elements can form simpler, closer compounds, and that on the same kind of constitution and the same kind of simpler union, and similar release of energy, in the constituents of the living tissues seems to depend all vital function. As far as we can see, all the energy which is released in the animal body is released in consequence of chemical union under the mysterious influence of life. When such union and such release are going on, the process may be changed entirely by the contact of molecules of allied constitution, with latent energy on the point of release, so held as to blend with that which is being set free as living tissue. Blending with this it may augment or oppose it. Remember that a difference in chemical constitution means a difference in the readiness with which the elements separate and re-unite, band on this depends the effect exerted by the energy they bear. I have recenty endeavored to explain this in a small look,* in which you can, if you desire, pursue these conceptions.

NERVE FORCE,

as far as we can see, is the result of such chemical change occurring under the influence of life in the molecules which compose nerve tissue. Chemical compounds may come into relation with the substance in which the change is occurring without exerting the slightest influence upon it. But another substance may come, even in amount inconceivably minute, whose molecules are so arranged as to fit in, as it were, with the changing molecules of the living tissue. The energy the new molecules bear seems to blend with that which is in process of ordered release in the living tissue, and to blend so suddenly and so effectively as to derange it entirely. The various nerve tissues which compose the centers seem to us the same, but they must differ in their precise chemical nature and in the precise chemical action which their life-work involves. This fact is revealed to us only by their different response to different chemical agents, but the revelation is often a startling one. The difference in response is certain, the uniformity in the nature of the agent is certain, and therefore the difference in result must be due to a difference in that on which the agent acts. Although we have no other evidence of this, consider the absolute significance of such facts as that atropine acts first upon the nerve substance of the eye, and strychnine upon that of the spinal cord.

THE ACTION OF ACONITINE.

Such an influence as I have spoken of seems to be almost universal in the case of aconitine. Its contact with any acting

*Extract from an address delivered before the Harlesden Medical Society. Contributed by the author as a reprint from the London *Lancet*.

*"The Dynamics of Life." (London: J. and A. Churchill, 1894.

nerve structure seems to be, as it were, so direct, instant, and precise as to generate, as it were, an avalanche of energy, sweeping all before it, or opposing the process of liberation of energy with a momentum that involves a sudden stillness among the whirling atoms whose throb is far below the range of human sense. Among the nerves thus influenced may be those on which depends the action of the heart, and with a sudden spasm or a sudden stillness the heart stops and life is ended. That which so acts we call a poison. Widely different from this as is that vehicle for energy which we call a food, the difference is one of degree. Every form of food is such by taking to the tissues new energy in fresh molecules. Between the two—the poison and the food—there is an almost infinite gradation of substances whose influence is exerted in like way by chemical compounds upon the chemical processes of life, upon the state of nutrition, and upon the mode of action of the living tissues. It is in this intermediate region that there is the range of therapeutic influence conveyed by the vehicles we call drugs. The difference is of course in part one of quantity. But it is by the relation of the latent energy of the agent to the energy being released in the tissue, and to the secondary effect of the action thus produced upon nutrition, that one wide scope for the influence of drugs can be readily perceived. There are others, but they are different aspects of the same influence, and the facts may, I think, be best epitomized by the statement that treatment by drugs would be correctly named "dynamical therapeutics."

OXIDATION IN THE SYSTEM.

Although I believe that it is generally true that what we call "matter" is only effective, whether it be employed as food, medicine, or as poison, because it is a vehicle for energy, some apparent exceptions should be at least mentioned. In the functional action of all structures in the body, molecules are constantly passing off which, having formed with oxygen lower compounds and having yielded their latent energy, are useless, and these are constantly being replaced by others formed under the influence of life from the material which the plasma has brought to the vicinity of the structure. It is possible that the molecules of some poisons may enter into the constitution of the tissues in abnormal amount, and thus disturb function by deranging the release of energy. There are also some cases in which atoms of some different element seem to enter and replace normal atoms, and thus derange. Whenever arsenic is brought in contact with the nerve elements, whatever be its combination, it induces not only functional, but also structural changes in these, leading ultimately to their degeneration. We can only explain this by supposing that atoms of arsenic are taken up by the nerve substance in the course of the molecular renewal which attends functional action, and it is reasonable to suppose that this is due to its close relation to phosphorus, which we know is a constituent of the nerve material. It is possible that such substitution may take place in a slight degree without any injurious consequences, and even, in morbid states, with benefit. The influence on the nutritional process may be actually beneficial when this is already in some way deranged. It may promote the subsequent due assimilation of phosphorus, and make this more adequate and effective. Of course this is only a speculation. It is sometimes a help to conceive how that may be which we cannot but perceive as a fact.

These remarks have reference, of course, only to the medicinal agents which act through the blood. There is a considerable scope for thought regarding the action of agents which do not pass into the blood, which act only upon the surface, or on that portion of our real exterior which is within us, as the alimentary canal. In this region, moreover, there is some room for bringing conception to the test of experiment. Many purgatives, of course, act through the blood, but chemical processes seem to take less part in the operation of saline aperients. These act rather by "flushing out," the liquid in which the salt is dissolved being merely added to by osmosis and exciting contraction. The subject, indeed, requires more special study than it has received. The great service of salines seems to me to be effected by removing that which would be in part reabsorbed.

EMPIRICISM AND RATIONALISM.

One other phase of modern therapeutical thought is to me a mystery. It is the contrast which is often drawn between the empirical and the rational in the use of drugs, and the disparagement of the former in comparison with the latter. Possibly it is a result of the influence of the scientific training which now dominates medical education. Beneficial as this training is, its influence may acquire a momentum that carries the effect too far, and, indeed, its influence may spread too widely for the good of those whose lives are to be devoted to the hard and often routine work of applying knowledge. The intense love for pure science begotten in the better class of medical students of the present day, warm with the ardor of youth, makes them slow to sink into the grooves to which they are predestined, and hinders their perception of that which they might gain and see therein. They yield at once to the distinction between the rational in therapeutics and the merely empirical. It is all very well to esteem the rational, but we have, I hope, seen that this esteem should not be allowed to cause an aversion from that which is precious, and yet cannot be called "rational" in the common narrow sense of the word. The antithesis of the empirical and the rational is itself an error. It is an instance of a common tendency to put a positive conception into a negative word. Because the empirical is not the rational it is conceived as irrational—the only simple negative we have, but one that implies far more than simple absence of the quality excluded. The "irrational" should be merely the "not rational," but in effect it carries us as far beyond neutrality as does "unreasonable." No one means by "unreasonable" a simple absence of the quality of reasonableness. We are so accustomed to the use of the mere negative for the opposite positive that an effort may be necessary to perceive the real meaning of the words. Not only is the empirical not positively irrational; it is doubtful how we are justified in considering that a truly rational element is absent from the empirical. The term "rational therapeutics" is applied to treatment in which a drug is given with success in accordance with preconceived ideas or with a theory. The theory may turn out quite wrong, although the result is the same. What, then, becomes of the rationality? In empirical therapeutics a drug is given because it is found by experience that in the particular condition it does good. Often we cannot even guess why.

THE THEORY OF MEDICINAL TREATMENT.

But the fact remains, and surely to act upon observed experience is as truly a rational proceeding as is action upon a theory which may be incorrect. After all, the medicinal treatment which can be based upon any definite theory is small. How seldom, moreover, can we use a drug to advantage which was discovered save by the purest empiricism. In not one drug in twenty, perhaps not one in fifty, of those of most certain service, can the use be traced to anything except unguided experiment. Our knowledge of these drugs, derived from the past—and often from the distant past—must be assumed to be the result of experiments innumerable, perhaps continued through the long tens of centuries in which the human race has lived among surroundings which alike compelled and suggested endeavors to counteract disease by every available means. The need for food must itself have led men to a knowledge of the physiological action of most herbs of the field, especially when domestication brought the habits of animals under observation, habits such as must have had the power of example. It is probable that since man became able to observe and to reason, every common herb of the field and fruit of the tree has been at some time tested, and thus by slow degrees the knowledge of a physical good and evil has been acquired.

OUR DEBT TO THE HERBALISTS.

It is strange, indeed, to note how far back goes the use of the drugs on which we most rely. Most of them can be traced into the mists of the popular knowledge which it is so easy to sneer at and would be so difficult to do without, or until they are lost in the bluer mists in which the distance shrouds alike the hills of Greece and deserts of Arabia, or to the time when the world learned its wisdom from the land where now only the sculptured symbols of man's thought stand silent in the cold moonlight of a long dead past. We smile at the popular herbal remedies. But it is to these that we owe the majority of our most useful drugs. I cannot conceive a therapeutist surveying a list of the chief drugs on which we depend in our daily work—and do not depend in vain—without a sense of wonder and perhaps of humiliation. We disinfect our rooms with burning sulphur; and so men did before the time of Homer. We purge sometimes with rhubarb, especially when some subsequent astringent influence is desirable, and so did the old Arabians for the same special reason. The value of castor oil in its chief use was familiar, probably for ages, to the natives of the East and of the West Indies before it was made known in Europe by a physician from Antigua 150 years ago. Aloes was employed in the same way long before the time of Dioscorides and Pliny. The knowledge of the influence of ergot in parturition we owe to the peasants of Germany, and the use of male-fern for tapeworm goes back to the old Greeks and Romans. The employment of mercury in syphilis by inunction and fumigation, which our nineteenth century therapeutists regard with such satisfaction, seems to go back to the time of the

Crusades, and it is said that its use can be traced in Malabar as far back as the ninth century. Podophyllin as a purgative we owe to the North American Indians. If we go through all the drugs on which we most rely we find the same story. Even in the case of those which are the latest additions to our resources, we find that, with very few exceptions, their use arose from what we must regard as pure empiricim. It was by accident that the local anæsthetic influence of cocaine was discovered. The unexpected results of simple experiments afforded us the chief use of antipyrine; and that which is perhaps the greatest practical discovery of modern times in the influence of drugs on disease—the use of bromides in epilepsy—was the result of a chance observation of its use on an allied state—also empirical. To this day we are without any rational perception of its mode of action or of the reasons for its use in given cases. I yield to no one in my sense of the importance of the rational in therapeutics; but we need to be careful lest, in contrasting the rational and the empirical, we allow our esteem for the one to induce a depreciation of the other. We can afford to despise no source or kind of help, or to permit our estimate to be lessened by the many warping influences to which our thought is liable.

I have, indeed, tried to frame a definition of rational therapeutics which I could illustrate by examples. I will not say that I have wholly failed, but my success is not sufficient to let me submit it for your consideration. But the attempt has impressed me with a doubt as to the propriety of considering that a theory, to explain an empirical discovery, makes the therapeutics rational. It is very easy to frame a theory of the action of a drug, and it is easy to extend this theory to the nature of the disease in which the drug does good, and at the same time to ignore the many other possible ways in which the effect may be produced, and so to build from a small and uncertain foundation an edifice which some new knowledge may reduce to that which most builders call "rubbish."

Jalap—Showing How it is Cultivated, and the Way to Know the Genuine Article.*

The purgative qualities of jalap, *Ipomœa purga*, have been known in Europe since the sixteenth century. It is, indeed, a product of Mexico, and derives its name from the City of Xalapa, which for long has been the center of the jalap trade. The plant is found on the eastern declivities of the Andes, at an elevation of 5,000 to 8,000 feet above sea level, in such localities in which rain falls almost daily. The plant is a climber requiring support, such as stakes or trellis. The flowers are rose colored, and the jalap occurs in tubers, varying in size from a small nut to a moderate sized apple. The tubers are underground stems. Formerly all the jalap of commerce came from Mexico, but during later years India has contributed her share, and the plant has been produced in the cinchona plantations of Jamaica, but in many instances had to be abandoned, as the jalap throve at the expense of the cinchona. The plant is said to grow freely in the southern parts of England, which fact is not generally known. Its flowers, however, appear so late in the autumn that they seldom expand, and the tubers are mostly destroyed by frost if not well protected. The drug is described in the British Pharmacopœia as being the dried tubercules of *Ipomœa* (*Exogonium*) *purga*, imported from Mexico. Characteristics—varying from the size of a nut to an orange, *ovoid*, the larger tubercules frequently incised, covered with a thin brown wrinkled cuticle, presenting when cut a yellowish grey color, with dark brown concentric circles.

As jalap is only used in medicine, to obtain the highest prices it is necessary to place the product on the market in the form best known to the wholesale druggists, who are the principal purchasers.

It is important to get the real article, as other kinds are very often substituted, which are not of the same medicinal value. Some little knowledge of the drug is necessary to prevent imposition. Good jalap should be tough, hard and often horny, becoming brittle when long kept, and breaking with a resinous fracture. It should be of a pale dingy brown, or dirty white color, having a faint smoky coffee-like odor and a mawkish taste; the substituted article does not answer to these several tests. The real jalap owes its medicinal quality to the resin, but the plant also contains starch and sugar, which, however, do not crystallize, gum and coloring matters.

The cultivation—writing from definite knowledge—requires study, as it needs a rich soil, for the crop is an exhausting one, and it is not until a third year that a return may be expected, and it has been clearly proved that at least 1,000 dry tubercules can be gathered from a single acre under cultivation, and similar crops may be obtained every third year from the same plants thereafter. In Mexico, however, jalap is dug up during the whole year. The small roots are dried entire, the larger are cut transversely, so that they may dry the more easily. This drying process is a very difficult and trying one, for about 70 per cent. of the weight has to be evaporated, and it frequently happens, when dried in the sun, that there is a considerable loss on account of some becoming mouldy and others becoming subjects of fermentation.

This loss is sometimes prevented by gashing the tubers, or by cutting them in slices, but jalap thus prepared fetches a lower price in the English market.

Drying entirely by sun heat is not always possible, owing to the natural humidity of the climate. The roots are, therefore, placed in a net and suspended over a constantly burning hearth of an Indian's hut, where they are allowed to dry gradually, and this accounts for the smoky smell so often detected in the drug when purchased. This special characteristic is considered by many druggists to be a proof of good tubers.

The roots of other plants growing in Mexico, especially in the neighborhood of Orizaba, are imported into Europe either by themselves or as an adulterant of the real article, one of which is known in trade as Tampico jalap, and this special kind has figured largely in the importations of recent years. It therefore requires some little knowledge and experience to detect the false from the true; some cannot be distinguished by the eye from true jalap, and it is only by chemical tests that the real quality can be ascertained.

The experience gained in jalap cultivation in the Madras presidency in India has shown that the plants require a rich, loamy soil, and the best is well drained grass land, laid out in terraces about 10 feet wide; this must be dug over and allowed to lay exposed to the sun for about two months, then drilled and manured and planted with potatoes. These must be lifted and the jalap tubers planted in rows a few inches high to prevent the water from becoming stagnant around them; when the plants have become established, ordinary culture is all that is necessary.

Planted in this way 1 acre has yielded 5,000 pounds of green tubers at the end of three years; these, properly dried, produced 1,000 pounds of jalap powder. A trial was made in this way some few years ago. Five acres of land were thus planted; the crop yielded 3,000 pounds of green tubers, producing 1,077 pounds of cured jalap.

The drug is imported from Vera Cruz, and altogether about 180,000 pounds finds its way into our English markets. So it will be seen that it is an article of some commercial importance.

* *The British and Colonial Druggist.*

The Ovaries and the Determination of Sex.

Some interesting observations have recently been made by Seligson upon the relation which the ovaries bear to the determination of sex. His theory is that ova from the right ovary develop into males, those from the left into females. Experimenting upon rabbits he found that when the right ovary had been removed only female young were born, while when the left ovary had been extirpated only male young were brought forth. But he further draws attention to another fact. He states that in all the cases of tubal pregnancy of which he could obtain notes, where the sex of the fœtus was given, 19 in all, those of the right side were without exception males, and those of the left females. These data certainly seem to add weight to his argument, and, moreover, are of great interest. If the author's observations in this regard are confirmed by subsequent inquiries the debated question of what the laws are which govern the determination of the sex of the fœtus will have been advanced a stage toward its solution. But, of course, many and repeated investigations and experiments will have to be undertaken and recorded before the evidence upon this point raised by the author's conclusions could be regarded as worthy of acceptance from a scientific standpoint.

A New Solvent for Resins.

The organic compound known as dichlorhydrin has recently been found by Fleming to possess the property of dissolving all resins. Amber and the various copals all dissolve easily. This new solvent, if it can be produced cheaply enough, affords a way of dissolving up all the splinters of resin and amber turnings as well as large pieces. So strong is the solvent power of dichlorhydrin that it soon shows its property in destroying stoppers, either of cork or rubber. The compound seems to be capable of wide technical application. Unfortunately its production still presents difficulties, so that it is doubtful the product can be made at a low price. But experience shows that when a substance is demanded by industry it will soon be produced at a price which allows of its use.

More About the New Photography.

Professor Geissler, of Bonn, has been experimenting with a view to utilizing the fluorescent effects of Röntgen's rays. He smeared a piece of paper with various substances, laid it on the dry plate, and exposed it to the rays. He has already found that chloride of iron, nitrate of uranium, and extract of cuba wood have the desired effect. He then steeped the dry plate itself in chloride of iron, and thus succeeded in further abbreviating the process. Systematic experimenting in this manner, he thinks, will be the best way of finding the fittest substances for expediting the process. Professor Geissler also points out that ordinary rays are just as little broken by the eyes of insects as are Röntgen's rays in the new photography, and he suggests that, as the eyes of insects can very easily be artificially imitated, such imitations may, perhaps, prove of use in the production of sharper outlines in the objects photographed by the new rays. A member of the Photographic Club, at Crefeld, has found that the time of exposure is shortened exactly by one-half by heating the plate. He heated it up to about 40 degrees C. (or 104 degrees F.), and the process then occupied only 15 instead of 30 minutes. This effect, it is conjectured, is probably due to the enhancement of the fluorescence by heating, and cannot fail to be of great use in the case of small apparatus.

Further experiments have also been made with the Röntgen X rays in the Military Academy of Berlin in the presence of several generals, officers and physicians. The object was to show that by means of photographing with these rays

REAL PEARLS COULD BE DISTINGUISHED FROM FALSE.

For this purpose a piece of jewelry was photographed, which was composed partly of real and partly of false pearls, the latter being, however, excellent imitations. After it had been exposed to the rays for three-quarters of an hour, the difference between the two was clearly to be seen. The real pearls were shown as dark opaque masses, but the imitations were transparent, and, above all things, clearly

SHOWED THE BAR

with which they were attached to the ornament. In order to establish what sorts of wood the Röntgen rays penetrate best, common pine, alder, mahogany and walnut were chosen for the experiments. Even the fine grain of the woods was reproduced by the rays. This justifies the hope that later on it will be possible to

REPRODUCE HUMAN AND OTHER ANIMAL TISSUES.

It appears that the rays pass best through pinewood, but that the dark stripes of resin have a disturbing effect. Consequently, alder is to be preferred for making the boxes for the experiments. Mahogany is less penetrable. A professor at the Chemical Laboratory at Budapest University has, it is reported, invented an improvement of the Crookes tube which enables one to make photographs with Dr. Röntgen's X rays in two or three seconds.

Artificial Wintergreen Oil.

Thayer gives the following practical method (*Amer. Journ. Pharm.*) of applying the hydrochloric acid process for the manufacture of synthetic wintergreen oil: Take 505.47 gm. of salicylic acid and 690.85 gm. of methyl alcohol (sp. gr. 0.820); place the alcohol in a wide-mouthed flask and add portions of the acid until a saturated solution is obtained.

Make the additions slowly, as all of it will not dissolve. Connect the flask with an upright condenser and heat it on a water bath until the contents are brought to the boiling point, then pass dry hydrochloric acid gas into the hot solution until the latter is saturated. Then add about 10 gm. more of the salicylic acid, again saturate the solution with hydrochloric acid and repeat the operation until all the salicylic acid has been added, the passage of the hydrochloric acid gas being continued for two hours after the last addition of the acid. It is necessary that the gas be thoroughly dried by being passed first over anhydrous calcium chloride, then through three bottles of sulphuric acid, before being conducted into the salicylic acid solution.

The lower oily layer, which separates, is washed with water until no longer acid to litmus, then distilled from a flask by the aid of live steam, the distillate is freed from excess of water by the use of a separating funnel, and finally dried thoroughly over anhydrous calcium chloride. The product thus obtained is of a slightly yellowish color, has an agreeable odor, and costs 90 cents to $1 per pound, the above quantities yielding 500 gm. of methyl salicylate. Ethyl salicylate, which has a more delicate odor, and a lighter specific gravity, can be prepared in the same way.

The Koumiss of the Caucasus.

The Caucasians designate under the name of "Kephyr" an acidulous beverage, lightly alcoholic, prepared by the action of a special ferment, known as "Grains of Kephyr," on milk. These grains are small yellowish-white masses, compact, elastic; when fresh they have a cartilaginous consistence; when dry they become hard, more friable, of a dirty yellow color, translucent (somewhat resembling tapioca or sago). They vary in size from a nut to a pinhead, and their surface is irregular and bosselated. Placed in water they smell somewhat, become softer and of a whitish color.

The zoöglea incloses two species of bacteria and a yeast, the latter probably identical with the yeast of beer (the *Saccharomyces cerevisiæ*). One of these bacteria is in short, immobile rods—the lactic ferment of Pasteur (*Bacillus lacticus*); the other consists of long bacilli, slowly motile, often showing slight enlargements at their extremities—this, the *Bacillus caucasicus*, is special. The part played by these different bodies is for each most distinct. The *Bacillus lacticus* secretes a rennet which coagulates the casein of the milk, a process necessary to its ulterior transformation; it also furnishes a special *diastase*, which changes the lactose into maltose by a process of hydration, thus fitting it to undergo the alcoholic fermentation through the action of the yeast. The *Bacillus caucasicus*, through the medium of a *casease* which is secretes, dissolves the precipitated casein, transforming it into an albuminose.

The milk, at first opaque and holding in suspension flocculi of the precipitated casein, is now transformed into a transparent liquid, rich in peptones, slightly acid, and containing considerable carbonic dioxide and some alcohol, these last being produced by the yeast on the saccharine matter of the milk.—From the French in the *Therapeutic Gazette*.

Correspondence.

The New Jersey Board of Pharmacy.

EDITOR AMERICAN DRUGGIST:

Sir—I have been informed that the present State Pharmacy Board of New Jersey is acting officially under the old law, and that the members are "holdovers," because new members had not been appointed.

I would therefore like to have the opinions of other pharmacists of the State in regard to the legality of the actions of the board since last spring.

As a graduate in pharmacy, as a drug clerk, and as a member of the New Jersey Pharmaceutical Association, I assume the right to inquire if the present doings of the board of this State are lawful, and what position would a recently registered person occupy if the action of the board proves to be unlawful?

The present board was appointed under the law of 1886, which act declared that the members of the board should hold office until their successors were appointed; but does not the law of 1895 declare that, "This act shall be a public act, and shall take effect immediately," and that "all acts and parts of acts conflicting or inconsistent herewith be and the same are hereby repealed"?

Therefore, were not the present members of the board legislated out of office by the new law, since clauses in the law of 1895 did not exist in the old law in regard to their duties and fees for examination?

Governor Werts failed to appoint five men from the fifteen which were appointed by the N. J. P. A., as the law required.

Is there then any Board of Pharmacy in this State?

A member informed me that they were holdovers under the old law yet. They hold meetings in Trenton, according to the new law, which specifies where and when they shall hold such meetings. They examine applicants for assistants or full-fledged pharmacists, charging $5 and $10, respectively, while the old law was $5.

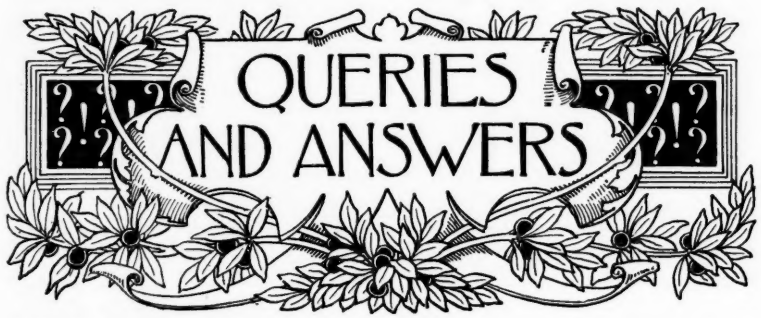
Permit me also to ask the pharmacists of the State if they indorse the Alpers curriculum?

I understand that 19 of the applicants at the last meeting of the board were persons who had failed once before the same board. Was that because of the new curriculum laid before the last meeting of the N. J. P. A.?

Hoping this may lead to my securing the desired information through your beneficial journal,

LEWIS W. BROWN, Ph.G.

MADISON, N. J., February 8, 1896.



We shall be glad, in this department, to respond to calls for information bearing on pharmacy or any of its allied topics, and cordially invite our friends to make use of this column.

When sending for the formula of any unusual compound, the query should be accompanied with information regarding the locality in which it is used, its uses, and reputed effect. When it can conveniently be done, a specimen of the labels used on packages of the compound should also be sent.

Soluble Extract of Ginger.—P. S.—The following formula is much esteemed by manufacturers:

Tincture of ginger, U. S. P.	1 pint
Tincture of capsicum	3 drams
Oil of ginger	2 drams
Water, enough to make	2 pints
Magnesium carbonate	4 drams

Rub the oil with the magnesia and add the tinctures; add about 14 ounces of water in divided portions, stirring vigorously the while. Transfer the mixture to a bottle and allow to stand one week, shaking frequently, then filter and make up to 2 pints with water.

Japanese Cachous.—G. W. B.—The fancifully named article which you inquire about has a composition resembling the following:

	Parts.
Ext. glycyrrhiza	100
Water	100
Acacia, powdered	30
Liquorice juice	30
Cascarilla, powdered	2
Charcoal, powdered	2
Orris, powdered	2
Oil of peppermint	5 drops

Dissolve the extract of glycyrrhiza in the water and to the liquor add the powdered acacia and liquorice juice. Evaporate the mixture thus formed over a water bath to the consistence of an extract. When of the proper consistence incorporate the remaining ingredients. Roll out the mass on an oiled slab and cut into squares of a suitable size.

Books for the Study of Pharmacy.—W. A. S.—We have published several lists of the kind desired during the past year and must refer you to back numbers of the journal.

Red Lights.—W. L. E.—The following formulas will furnish compounds such as are used to produce red fires for stage purposes:

I

	Ounces.
Strontium nitrate	8
Potass. chlorate	2
Shellac, coarsely ground	2

II

Strontium nitrate	10
Potass. chlorate	1
Charcoal	1
Shellac, coarsely ground	1

All the articles must be free from moisture, and should be dried and made into granular form separately with the shellac in coarser powder than the rest of the ingredients. The mixing is best done on heavy paper, using a wooden spatula or wooden tools.

Purified Petroleum.—H. B. R. writes: "Please inform me what is meant by and where I can obtain some purified petroleum for use in preparing an emulsion with hypophosphites."

Fluid petrolatum is what is meant here, and this can be obtained through any wholesale druggist. It is official in the Pharmacopœia under the title liquid petrolatum. The refined article is sold under a number of fancy names, "Liquid Albolene" for example.

Staley's Eczema Lotion.—H. B. R. asks us to complete the following formula:

	Grains.
Calomel	32
Acid. nitric dil. } aa	
Acid. muriatic dil. } aa	
Acid. pyroligneous	
Glycerin	
Chaulmoogra oil	

He adds: "The product is said to be a 'dead shot' in eczema and forms a light reddish liquid to be used diluted one-half with water."

We do not place the preparation, and regret our inability to assist our correspondent.

Malted Cod Liver Oil Emulsion.—J. T. M.—The following is accounted an excellent formula for the preparation named:

MALTED COD LIVER OIL EMULSION.

Cod liver oil	8 ounces
Extract of malt	8 ounces
Yelks of egg	two
Tragacanth gum, powdered	16 grains
Hot water	1 dram
Essence of lemon	10 minims
Essence of bitter almond	10 minims

Weigh the extract in a ½-pint graduate and add the warm water to thin it, stirring quickly. Beat up the two yelks in a mortar with the powdered tragacanth and add the oil and and extract alternately, lastly the flavoring essences, which may be varied to suit the taste.

Wild Cherry Phosphate.—L. S.—A very palatable soda water syrup of this kind can be prepared as follows:

German black cherry juice	4 ounces
Glycerin	1 ounce
Alcohol	3 ounces
Phosphoric acid, dilute	2 drams
Water, enough to make	1 pint

Mix and add 1 ounce or more to each pint of simple syrup used.

Elixir Viburni Comp.—A. R.—The formula in use at the New York Hospital in a modified form reads as follows:

Ext. viburni fluid	320 minims
Ext. piscid. erythrin	160 minims
Hydrastin. sulph.	3 grains
Elixir adjuvan. N. F., to make	4 ounces

Dose, one teaspoonful.

Elixir Ferri, Quinin et Strych. Phos.—A. A. L.—Of the numerous formulas which have been published from time to time the following is said to produce the nearest approximation to the one asked for. Proceed as follows:

Iron phosphate, scales	256 grains
Quinine hydrochlorate	128 grains
Strychnine sulphate	2 grains
Glycosine or saccharin	24 grains
Potassium citrate	32 grains
Alcohol	4 fl. ounces
Glycerin	6 fl. ounces
Hot water	6 fl. ounces
Water of ammonia	40 minims

Dissolve the strychnine and afterward the quinine in the alcohol; then add the glycerin. Dissolve the iron and the potassium citrate in the hot water. Rub up saccharine with the ammonia water and to this add the iron and potassium solution and mix with the alcoholic solution of the alkaloids.

The makers of Freligh's Tonic do not, as we understand it, make any secret of the composition of their preparation, and particulars can be obtained on demand. We should not advise you to market a substitute preparation of the article, and when Freligh's Tonic is asked for the original compound should always be dispensed.

Keeley's Liquor Cure.—H. M. F.—G. E. W.—Particulars regarding this compound can be obtained by consulting previous issues of this journal.

Melachol.—The makers of this article state that every fluid dram contains 85 grains of combined sodium phosphate, citric acid and sodium nitrate. This is the extent of our information on the subject.

Preparation of H_2O_2.—C. S.—The official process in the United States Pharmacopœia furnishes a solution which is the equal of any proprietary preparation. The article which you inquire about (Pyrazone) is undoubtedly prepared after a similar process.

An Incompatible Dentifrice Formula.—D. writes: "Please inform me how I may prepare the accompanying formula so that the compound will not precipitate. I have made it up in different ways, sometimes letting it stand for three months, then siphoning it off and letting it stand again, but a precipitate still forms. The formula is:

Oil gaultheria	16 ounces
Oil cassia	10 ounces
Oil peppermint	4 ounces
Oil cloves	4 ounces
Alcohol	14 pint
Water	14 pints
Castile soap	27 ounces
Granulated sugar	24 ounces

We should say the trouble is with the sugar. If you will substitute saccharine or glycosine in suitable proportions, say 40 to 60 grains, for the sugar a clear solution will result. The proportion of oils to alcohol seems a trifle in excess, and you may either have to decrease the amount of these or make the compound stronger in alcohol.

Recognition of Diploma.—W. G. E.—The Missouri Board of Pharmacy recognizes no diplomas except their own. Graduates of pharmaceutical colleges are required to pass the examination of the board if they wish to conduct a pharmacy in Missouri.

BUSINESS HINTS

Advertising Aid, how, when, and where to Advertise.

PRACTICAL HINTS AND SUGGESTIONS. CRITICISM AND CONSTRUCTION OF ADVERTISEMENTS.

In Charge of Ulysses G. Manning

The department editor will be pleased to criticise any advertisements submitted and to suggest improvements. Questions answered and advice given. Our readers are cordially invited to avail themselves of this help.

ADVERTISING FOR WOMEN.

IT is well for advertisers to remember that two-thirds of everything in the merchandise line is bought by women. Women not only do the buying for the home, for themselves and for their children, but frequently have much to say in the selection of articles used exclusively by the sterner sex. We sometimes find clothiers and dealers in men's furnishing goods, attempting to reach men through ads that appeal directly to the women; and it is good advertising, for the man uninfluenced by woman is yet to be born. Nathaniel Fowler, Jr., one of the few advertising experts says: "I have made several experiments, and without exception the results have proven that to reach man you must cater to the woman; to reach woman you must cater to woman. You must cater to woman anyway, and comparatively little to man, for man can be reached through woman, but woman can never be reached through man.

Women, as a rule, have more time to read than men; they read papers more carefully. They find an element of news in ads that men overlook. They are less skeptical and more easily influenced than men. Their trade once secured is of a permanent character, and, best of all, women are splendid advertisers. A man might trade with you a dozen years and never say a good word for you, but a woman never. If she forms a liking for your store she is going to say something about it. Winning her favor is winning her influence, and that is no small thing.

Most of the wants supplied by drug stores are of a household nature, therefore whenever possible appeal to the ladies.

Criticism and Comment.

MALDEN, MASS.

U. G. MANNING,

DEAR SIR—I have taken a great deal of interest in your department, and have at various times adopted some of your suggestions. As you are willing to pass judgment on ads, I send two for criticism. I change often and think a small ad, to the point, pays about as well as a large one. I am near the post-office, and a few years ago paced off the distance and found it about 37½ steps. I have used this to locate my place of business, and I must say that it has been the best ad I ever struck. I think some such oddity is a good scheme.

C. A. CHARLES.

Mr. Charles' ads are about two inches single column; they are fairly good, but are poorly displayed. In all his printed matter, Mr. Charles has this line:

37½ STEPS WEST OF P. O.

This is very good—especially the half-step. I have, no doubt, that this clever line has stuck in the memory of a majority of those who have read it, and that many a Malden citizen has, almost unconsciously, stepped off the distance, and can certify to the accuracy of the figures. Any quaint, unusual or striking phrase associated with an advertiser's name helps to fix the name in the mind of the public. If the phrase gives information as to your business or location so much the better.

The paper Mr. Charles uses is black with heavy displayed lines. His ads look like all the rest I suggest that a little more actual information be given on the preparations advertised. Try the effect of setting with a single bold headline followed by a small, solid paragraph of reading matter. Use not over 35 words in the paragraph; have it set in the ordinary body type of the paper; set about one and one-half inches wide, and have your name follow in type about half as large as that used in the headline. It will pay to have the "37½ step" line engraved, using some distinctive letter. The same phrase constantly appearing in your advertising will be all the more valuable, if it always looks the same.

In the two ads and a label sent me, Mr. Charles appears as a druggist, pharmacist and apothecary. I always advise sticking to one title in advertising. Drill your name and profession into the public until they become inseparable. The task will be easier if the combination of words is never altered.

***

HORNELLSVILLE, N. Y.

MR. U. G. MANNING.

DEAR SIR—I have the pleasure of inclosing under separate cover, two copies of the *Daily Times* containing my ad, which I wish you to criticise. I admit that the press work is poor in one, and I wish they were able to furnish a heavier border; but outside of this would you think the ads would do good work. I beg to thank you for your progressive business hints, found in America's only drug journal; hints which I take great interest in and try to profit by.

HORACE G. PIERSON.

Your advertising is all right, and I am sure will bring business if you keep persistently at it. Your display is good, and the ads are well written. The one on Hot Water Bottles would have been strengthened by a price or two. You ought to see results from your Cough Stop advertising if ads are frequently changed, and you keep them going for two or three weeks. A heavier border would be advisable, and I suggest that you buy one for your own use. These ads are reproduced on the following page. The original form was 2½ inches double column with border.

***

BE ORIGINAL.

Frank H. Synder, Mahanoy City, Pa., sends his "Koff Kure" circular for criticism. The fault of your circular is that it is too much like too many others. It lacks originality, attractiveness, and, most of all, lacks argument. I fancy that the first cough cure circular stated that the remedy was "a safe, sure, and reliable cure for coughs, colds, hoarseness, bronchitis, and all diseases of the throat and lungs." "It has cured when others failed," and "has cured others, will cure you" are better, but all this has been worn threadbare by repetition. A circular ought to tell just what people want to know. It ought to be specific.

If the preparation is in any way different or better than the ordinary run of cough remedies, the circular ought to tell how and why it is different and better. Were you to hear a competitor stating that your preparation "didn't amount to much," you would probably fire up, and in 60 seconds give about 15 good reasons why it was better than any other. Your remarks on such an occasion—leaving out the exclamation points—would be what are needed to make this a good circular.

The circular is well printed on good paper, but I do not fancy these semi-poster sizes. As a counter wrapper it is all right, but for the legitimate purposes of a circular it would be more effective if you made a four page folder of it. The testimonials are good, and atone, in a measure, for the lack of argument elsewhere.

***

BE SPECIFIC. DON'T SPREAD TOO MUCH.

Dr J. A. Miller, Harrisburg, Pa., distributes a small circular enclosed in an envelope, which also bears an ad. Cuts are employed on both circular and envelope. The talks are on the business in general, with several specialties woven in It is apt to be read, and will do some good. All these things would be better, however, if they did not cover so much ground. It is better to take up one topic at a time and issue circulars often.

AN EYE-CATCHING ADVERTISEMENT.

H. H. Hay & Son, Portland, Me., recently forwarded an eye-catching ad. They use a single column space with border. They had set, clear around the ad next to the border, these sentences: "Kindly return to us any purchase that is not satisfactory, and receive your money back. It is our endeavor to sell you only what you want. H. H. Hay & Son." The entire middle portion of the space was left blank. The effect was, of course, striking, and doubtless enabled Messrs. Hay to forcibly drive home a reminder of a very excellent business method. Such advertising is good, if not indulged in so frequently as to lose its force.

***

A DAINTY BOOKLET IN THE "POWERS" STYLE.

EASTHAMPTON, MASS.

MR. U. G. MANNING.

DEAR SIR—We inclose for your criticism a booklet which we issued last season. We expect to put out another one this spring, and if you will kindly mention, in the AMERICAN DRUGGIST, our failing in the inclosed we would be greatly obliged. Yours very truly,

J. A. LOOMIS & SON

This is a dainty little booklet of eight pages and cover; size about 3 x 4½ inches. I don't want to pick flaws in it; I want to praise it. Whoever wrote this can do as well again, and, doing as well, he will do well enough. Before I had read two pages, I said "J. E. Powers." If Messrs. Loomis are themselves the authors, I can pay them no higher compliment than is conveyed in the above suspicion as to its origin. The booklet is in the style of this well-known writer, and is well-nigh perfect, both in matter and in the artistic simplicity of the printing The cover bears this title: "Ice Cold Facts." Then follows a little talk on soda water, information as to the quality of service afforded, the beverages served, ice cream soda, crushed fruits, ending with a page or two of "other matters"—a reference to their stock in general.

A druggist who puts out so excellent a piece of printed matter as this can feel absolutely certain that it will pay. No one is going to overlook it, destroy it, or fail to read it. If a suggestion for this year's booklet is wanted, I would offer this: Enter a little more into the details of good soda-water making. Tell wherein the art lies, and attempt to clinch the trade by educating people up to your standard—make competent judges of them.

Retail Advertising.

BERLIN, N. H., January 23, 1896.

Mr. Charles Austin Bates, New York City:

DEAR SIR—I have been talking with a retail druggist about his advertising. He claims that it does not pay a druggist to advertise—unless, perhaps, he advertises a preparation of his own make or some leader. He mentioned several large druggists in Boston that do not advertise. He claims to know what he is talking about, having been connected with several large concerns that have done a large amount of advertising. I was not sufficiently well-posted to cite cases (which he asked me to do) where druggists had been benefited by advertising, but I think there must be such cases. I am one of the many who are of the opinion that if anybody understands advertising, its Charles Austin Bates, and I have written you this letter in hopes that some time you will say something about retail druggists' advertising in your department of *Printers' Ink*.

Very truly yours,

E. J. BARNEY.

I do not see why a retail druggist should not advertise preparations of his own, if he has anything that is worth advertising. I do not see that that has anything in particular to do with the case. Just what methods a man shall pursue in his advertising does not amount to very much so long as the advertising pays. A druggist may make a specialty of anything he pleases, whether it is selling soda water or filling prescriptions, or making a substitute for "Scott's Emulsion."

A CUTTER'S SUCCESS.

When I first read this letter I was going to cite the case of W. I. Boreman, of Parkersburg, W. Va., who attributes his very gratifying success to the good advertising he has done, and then I happened to remember that Mr. Boreman does have several preparations of his own, which he advertises along with other things. Boreman, however, is a cutter. That is to say, he runs his business on business principles, buys his goods at the lowest price he can get for the right sort of stuff, and sells them at a reasonable advance. Because he is smart enough to do this, and to get more trade than his slower brethren, he is dubbed a "cutter," and is frowned upon accordingly. I can understand why the old-fashioned pharmacist, who regards himself as a dignified and unapproachable professional man, would feel the utmost disgust to see his trade going to the wicked cutter. That's what is happening wherever there is a cutter pitted against a pharmacist, and I am inclined to think that the chances are in favor of the cutter being a better pharmacist than the pharmacist. If he is not he can hire a pharmacist. There are plenty of really good prescription compounders who haven't a grain of business sense and could not run a peanut stand profitably. They are all right when they are fitted into the proper niche, but they ought not to try to run a drug store.

THE TENDENCY OF THE TIMES

may be altogether wrong. I have nothing to do with that. I take the facts as I find them, and every wise business man does the same thing. There is no use bucking against a fact. If the drug business can be made successful by cutting, and if it is going to dwindle without cutting, then for goodness sake get out the axe. There is no use sitting still and saying that just because you are right you are going to everlasting smash on principle. The pharmacist may be right and the cutter may be wrong, but if the pharmacist sticks to it long enough he will starve to death. The editor of one of the drug trade journals told me once that it did not pay to advertise a drug store, and he said he knew, too. He said that he had had a beautiful drug store in Nashville, Tenn.—a better drug store than there was any place around in his neighborhood, and he didn't advertise it. And he failed. That's the way he knew advertising didn't pay. That sounds like fabrication, but it is an absolute fact. That is what the man said to me. That is the reason he gave me for believing that advertising did not pay. He was a pharmacist. He had no use for the commercial druggist. He had the idea that druggists ought to be professional men, chemists and things like that, and that they ought to drop all the profitable side lines and give up all the 150 per cent. profits that they make on Sundays, devoting their whole time and attention to

Cough Stop

Doesn't clear the conscience, but it will clear the throat and lungs. It is pleasant to take—it touches the spot—it is safe and quick.

20 Doses 10 Cents.

Horace G. Pierson,

DRUGGIST,

Main St. - Canisteo St.

These Cold Nights

You will sleep the sleep of the just and not wear that weary look in the morning if you take to bed with you one of our all rubber

...HOT WATER BOTTLES...

If you have a stiff neck, or pain in the back or side, lie on the bottle—if it bursts we will give you a new one. Goodyear Rubber Company made them and we know they are right and well worth more than we ask for them.

HORACE G. PIERSON'S

Prescription Pharmacies.

compounding prescriptions, on which they would make all the way from 200 to 1,000 per cent., according to how they felt on that particular day.

I do not mean to say that the ability to compound a prescription accurately is not a very valuable accomplishment. Of course, in *so* far, the drug business is a professional business. If the doctor cannot have intelligent attention for his prescriptions, it will do him very little good to write them, and it is often the case that human lives hang in the balance when a prescription is being filled. A careless or incompetent prescription clerk can do more damage than he is worth. The position is a responsible one, and should be filled intelligently and conscientiously, but that need not prevent the head of the concern being a business man.

I cannot see any difference between the general drug business as it is now conducted and any other retail mercantile business The druggist supplies the daily needs of the people. I do not know how it is with other people, but I know that 99 per cent. of my drug bills is not for the filling of prescriptions. It is astonishing how many things you can buy in a drug store without buying drugs. These things are merchandise. Prescriptions are not merchandise. I would be afraid to have the price of my prescription cut, but I am very glad when I can get some standard patent medicine, or a toilet article at less than the manufacturer's list price. If I were a druggist, I would advertise high prices on prescriptions and low prices on other things. It requires skill to compound a prescription, and the skill ought to be paid for. I would rather have two cents' worth of medicine and a dollar's worth of skill in a prescription than to have a dollar's worth of medicine and two cents' worth of skill.

I am afraid I am talking more about the drug business than I am about advertising it. The long and short of the advertising question is that it will certainly pay to advertise a drug business, just as it pays to advertise every other business. There is no reason in the world why it should not. Once let people understand what advertising really is, and there will be a lot less nonsense about it. There is no mystery about it. It is simply telling people where they can get what they want, or what they think they want. That is all there is of it. There are many ways of conveying this information, and there are many cases which make given articles desirable. A very superior excellence of quality, or a very exceedingly low price, or both, may make a thing desirable. Sometimes an article is desirable because it is convenient, and a good many drug stores in New York owe much of their patronage to their convenience. We all know that we can go down to Macy's and get a cake of Cuticura soap for 11 cents, but it would cost us 10 cents car fare, and take us two hours to go there and back and we can get the soap right around the corner, or generally right *on* the corner, for 20 or 25 cents. I believe that even the local corner drug stores in New York could be advertised profitably. There is certainly a great difference among them, and a great difference in the amount of trade that two stores transact in the same neighborhood. I have in mind two drug stores within two blocks of each other in a good neighborhood on Columbus avenue. The one which has been longest established, and which ought to do the most trade, is a sleepy looking sort of place that I should think did only half or one-fourth the business that the other one does. The only advertising in either case is the attractive appearance of one store, the courteous attention accorded to customers, and the adequate display of goods. Anybody who knows the two stores and the difference between them will certainly go to the more attractive place.

One man may tell another, and that is advertising. However, the news is diffused, it is still advertising. If a man sees from the outside that a drug store is a likely looking place, he will go there in preference to the dingy store down the street. This information can be conveyed in the right sort of advertising. It can be given to people who only pass the store. The more widely the knowledge is distributed, the more the trade will grow. Any good store will stand good advertising, no matter whether the store sells dry goods, or liquors, or cigars, or drugs. No store can succeed without advertising of some kind. Do not misunderstand me. Advertising is not necessarily printed words in the paper. It is not necessarily the distribution of circulars, or the painting of signs, or the posting of bills. The advertising may be done in the store itself, and this is the best of all advertising. If it isn't done, all the other advertising is discounted. Advertising may be gained by the proprietor's large circle of acquaintances. When two men are introduced, the chances are that each will find out the business of the other before they part. If they do not, the friend who introduced them will be asked what business each is in. That is one of the first things one man wants to know about another. It seems easier to take a man's measure when you know what business he is in. You can classify him better.

I want to say again that no business can succeed wthout advertising of some sort, and the better the advertising, the great the success.

It does pay to advertise a retail drug store.—*Printers' Ink.*

A Microscope as an Advertising Attraction.

F. W. E. Stedem, who is a prominent member of the Apothecaries' Company of Philadelphia and of the Philadelphia College of Pharmacy, is a successful business man as well as a good pharmacist. He recently said apropos of advertising: "For several years past I have been thinking, now and then, of putting a strong microscope in my store, for the interest that my customers would take in it. I hesitated for a long time, for fear that meddlers would try to tinker with it, and it was with many misgivings that I placed my next best instrument in the window, protected only by a sign, 'Look, but please do not touch.' It remained there for two months, and in all that time only one person, of all the hundreds who used it, put a finger on the adjustment. I took up the ordinary housefly first, and week by week showed legs, feet, head, wings and body. The display caused a great deal of interest, and, as the instrument was better than ordinary, school children and adults came into the store for the express purpose of peeping into it. I am making slides of other common house insects—fleas and red ants—and will display them in my better instrument. I put a sign on the table telling what part of the insect is shown on the slide, and asking visitors not to handle the microscope, and the thing is safe without any other precaution."

The Value of Confidence.

The following, from *The Retail Druggist*, presents a lesson which speaks for itself, it adds:

A correspondent writes us that while he was stopping at a hotel in the northern part of the State one evening, he overheard a conversation between two agents who had met after two years' separation. One said to the other: "Come and take a drink." "No," said his friend, "not for $100 would I." "Why, you used to drink." "Yes, but let me explain. Two years ago I engaged with a Buffalo house to travel for them. They packed my grip with samples and gave me $50 for expense money. I started for Scranton, Pa., and was gone two weeks, staying there all the time on a drunken spree. The $50 was all gone, and I had not sent in any orders, so was obliged to borrow money enough to get back to Buffalo.

"I went into the office Saturday, delivered the samples, and said to the proprietor: 'I am done traveling.' 'But,' said the merchant, 'where have you been? We have not heard from you. What have you been doing?' I replied that I had been drunk, had spent all the money and borrowed some to bring me back. 'Now, go home, sober up and come here Monday morning,' he replied. I went down to the office Monday sober; he handed me $50 and the sample case, and said: 'Go and make a man of yourself.' I thought if he had that confidence in me, I ought to have as much in myself, so started out and have been on the road ever since. I now own a home, and have a wife and baby. You can rest assured I have not taken a drop since and you could not induce me to drink."

Caring for Stock.

"There is a lesson for retail druggists right there," said a wholesaler recently as he pointed to four or five bottles of proprietary articles on a desk near him. "Every one of these bottles has on it an Internal Revenue stamp, which shows that it was purchased either before, during or immediately after the war. That stock comes from a druggist who has just failed, and every druggist ought to fail who, like him, kept no better care of his stock than to allow it to deteriorate, so far as the packages were concerned. Those are staple goods. Look at the condition of the containers. He allowed them to go to ruin with dust and dirt, and evidently sent for fresh stock while they were on the shelves. The drugs themselves are probably as good as when they were first put up, but they are worthless and can't be exchanged, simply because of their appearance."

Again the intelligent coroner's jury. A photographer killed himself by taking cyanide of potassium, and at the inquest the jury found that "the deceased died from poisoning, but for what purpose the poison was taken there was not sufficient evidence to show." This asinine assemblage of good men and true is apparently under the impression that cyanide of potassium is taken as a pick me up, or in the way of a friendly drink with a companion.—*London Sun.*

NEWS OF THE FORTNIGHT.

Grocers and the Pharmacy Law.

The Pennsylvania Board of Pharmacy has been stirring up the grocers of Pittsburg and Allegheny City, but has not found such a widespread violation of the pharmacy law as that reported by President Cameron in Brooklyn. Further thrilling details of President Cameron's tour of inspection came to light during the meeting reported on page 141, including his escape from the cleaver of a butcher-druggist. The New York State Board is also after the grocers (p. 136), while the New Jersey Board has made a mild effort in that direction (p. 135). In Michigan also (p. 134) the board has been after grocers as well as after unregistered pharmacists.

Pure Food Prosecutions.

The Ohio commissioner keeps up his attentions to the drug trade and finds (p. 135) that the druggists will fight.

Legislation.

The opposition to the proposed changes in the Massachusetts pharmacy law seems to gain strength, and many and vigorous protests have been lodged. The board, however (p. 135), still feels confident of carrying its point, and has at last won the support of the total abstinence element.

The Kentucky pharmacists also are moving for a revision of the pharmacy law (p. 135).

Prices and Cutters.

The St. Louis trade seems to be "about" to do something to the cutters (p. 136). It is to be hoped that the results will be more satisfactory than those heretofore attained.

The advance in the jobbing prices of several of the staple proprietaries is attracting considerable attention (p. 136) and much unfavorable comment, as in the meeting of the Apothecaries' Guild in Boston, which is reported on page 142.

At the hearing before the sub-committee of the Committee on Ways and Means the retail drug trade was not represented at all. The manufacturing pharmacists and the perfumers were ably represented.

Enforcing the Law in Michigan.

MR. EWING DEVOTES THREE WEEKS TO A TOUR OF THE STATE—FINES IMPOSED RIGHT AND LEFT—A GENERAL MERCHANT PAYS UP—STRICT LINES TO BE DRAWN.

DETROIT, MICH., February 17.—Hon. A. E. Ewing, Attorney for the State Board of Pharmacy, recently returned from Grand Rapids, from a three weeks' trip through the State, during which time he made it particularly hot for unregistered druggists and clerks. Mr. Ewing, however, says that he didn't get them all, and that unless they take warning from the examples he made more scalps will shortly be hanging at his belt. He visited Owosso, Downington, Minden City, Seney, Grand Marais, Marquette, Ipsheming and Ontonagon. Several arrests were made, and in each instance a conviction was secured, resulting in fines ranging from $10 to $25. In every instance the erring druggist pleaded guilty and saved the costs of the trial. At Minden City Dr. McNaughton and Dr. Totten were hauled over the coals because they were unregistered and employed no registered help. Both coughed up $10 apiece.

At Laingsburg Frank Allyn, an unregistered clerk, was taken to Owosso and fined $25 and costs. Burt Carmichael of Ontonagon was soaked $10 for the same offense. Arthur Desjardin of Marquette and Dr. Tetter of Grand Marais, ditto. W. W. Hargreave, a general merchant at Seney, handled a stock of drugs in connection with his other business without being registered. It cost him $10 and costs of the trial. Hargreave was so disgusted with his experience he packed up his stock of pills, etc., and shipped them off on the next train. Attorney Ewing says he suspects that there are other general merchants, especially in Northern Michigan, who are handling drugs and poisons and dispensing them without the knowledge which is required by law. It will be remembered that Mr. Ewing recently clarified the atmosphere in Detroit, and the courts reaped a goodly harvest of fines as a result. The State Board of Pharmacy is doing everything in its power to enforce existing laws.

The New Jersey Board After the Grocers.

On January 29 Wm. C. Alpers, secretary of the New Jersey Board of Pharmacy, was sent by the board to Paterson to visit the Paterson pharmacists and ascertain their views on the present law and the actions of the board. He visited nearly every pharmacist in Paterson, as far as time allowed, was cordially received by all of them, and with the exception of one they all were well pleased with the present state of affairs and expressed their approval. The one exception was a doctor of medicine who conducts a pharmacy in violation of the law without registration, and his objection to a strict examination can easily be explained.

The majority of Paterson pharmacists, however, complained that many grocers and other dealers daily violate the law in selling poisonous articles, without any knowledge of the dangerous nature of such drugs, and urged him to induce the Board of Pharmacy to stop such illegal practices Mr. Alpers has laid the matter before the board, and unless the violators desist action will soon be taken against them. The law enumerates the articles that can only be sold by registered pharmacists as follows:

Arsenic and its compounds or chemical derivatives; corrosive sublimate and other poisonous derivatives of mercury; phosphorus and its poisonous derivatives; prussic acid and its poisonous derivatives; tartrate of antimony; essential oil of bitter almonds; oils of tansy, savin or croton, chloroform, chloral hydrate, aconite, belladonna, conium, cantharides, digitalis, hyoscyamus, nux vomica, Indian hemp, veratrum viride, yellow jessamine, opium, their alkaloids or other preparations (except paregoric and other preparations of opium having less than two grains to the ounce); ergot, savin, cotton root and their preparations, and all poisonous proprietary articles.

At the meeting of the Kings County Pharmaceutical Society in Brooklyn, on February 11, Mr. Alpers narrated his experience, and said that in one case he found a grocer selling laudanum put up in bottles bearing the label of the druggist who had been the most vigorous in his denunciation of the grocers of the town. The grocer explained that the druggist was quite an enterprising business man, as he sent around twice a week to keep him (the grocer) supplied with a full stock.

The Paterson *Press* printed an item criticising the New Jersey Board of Pharmacy and claiming that the examinations before the board were too severe for druggists and belonged to medicine rather than pharmacy. "A well-known local physician," without name, was reported to have called the proceedings "an outrage," and it was hinted that the members of the board were unfair in their doings.

Mr. Alpers made a very vigorous reply to this in a later issue of the *Press*, and we append a portion of his letter:

Allow me, as a member of the New Jersey Board of Pharmacy, to comment on these incorrect and vague statements.

Candidates who fail generally blame the examiners and are very quick in substituting alleged unfairness for their ignorance. Exaggerations mostly accompany such charges. So it is here. Your informant asserts that "at the last sitting of the board, three months ago, out of 100 applicants only four succeeded in getting through." The facts are that at the meeting referred to, October 17, 1895, there were 26 applicants, six of whom passed—that is, about 24 per cent.—instead of four, as claimed. If one man, a graduate of a College of Phamacy, failed five times, the fault must lie with him; for at each of the five meetings every other candidate from his college passed, showing that the graduation from a good college is generally the best guarantee of success. The curriculum after which the board examines was not adopted arbitrarily by the board, but recommended by the New Jersey Pharmaceutical Association after a careful discusion at their last annual meeting in Newark, May 22, 1895, and therefore represent the wishes of the majority of the pharmacists of the State.

That the meetings of the board are now held in Trenton instead of various cities of the State is a wise innovation, adopted also by other examining boards; for Trenton with its excellent

normal school not only furnishes better accommodations for larger classes but also provides the board with a chemical laboratory for practical work which could not be had in any other city of the State.

If the three candidates from Paterson (not two, as was stated by your informant) failed to pass, I trust that they will not be discouraged by such a failure, but rather be instigated to new efforts, until they reach the goal of their ambition.

The New York State Board Enforcing the Law.

SYRACUSE, February 13.—Secretary Dawson, of the New York State Board of Pharmacy, issued 26 notices to retail grocers in Utica, who have been selling drugs in defiance of the Pharmacy Act. Two of the grocers became frightened, and telegraphed immediately, offering to settle.

The Board has also begun a vigorous campaign against the violators of law in regard to registration. Complaint was recently received by Mr. Dawson that C. Veeder, of Rosendale, N. Y, placed an unlicensed man in charge of his store. The necessary evidence was procured, and both proprietor and J. H. Vosburgh, the clerk, were served with notices. The case did not get into court, as Veeder obtained the consent of the district-attorney to settle the matter outside. The Board compromised with Veeder by the payment of $50, and with the clerk by the payment of $100. In this case the violation was done deliberately, as the clerk had tried the examination several times and had failed. He was given an examination after the case was settled and managed to pass.

Secretary Dawson states that the Board has been hampered in its work by the difficulty in obtaining evidence, notwithstanding the fact that the informant will be fully protected. Numerous complaints are received, but when evidence where with to establish a case is asked for the complainant usually refuses to obtain it.

Druggists' Prosecutions in Ohio.

CINCINNATI, O., February 17.—Drug affairs were never in such a chaotic state as they are at present. Two cases have been tried against local druggists, charged with selling drugs not up to the standard, but the defendants came out victorious in the trials. The officers of the Food and Dairy Commission, however, have eighteen other cases against druggists, and news of the outcome of these suits will be awaited with intense interest, not only here, but all over the country. The local association of druggists, which is composed of more than 70 members, is doing all in its power to beat the cases, and all decisions before local magistrates will be appealed to higher courts where the defendants think they will have little trouble in winning their battles.

A GOULARD'S SOLUTION CASE.

One day last week Robert Groenland & Bros., who own two stores, one of which is at Fifth street and Central avenue, were tried for selling solution of subacetate of lead not of the proper strength. It is well known that this solution is subject to more or less chemical changes. The solution upon which the Groenlands were placed on trial was purchased at one of their stores by an officer of the Food and Dairy Commission on October 9, and now almost four months later they are brought up for trial. The case was stubbornly fought, but the prosecution won and the case was appealed.

The next case to be tried is against Druggist Knemueller, who is charged with selling impure phosphoric acid. Of course, a jury will be demanded, and in the event of the State bringing the case will be taken to the Court of Common Pleas. Pharmacist De Lang, at Fourth and Broadway, who was arraigned a few days ago for selling dilute phosphoric acid won his case, notwithstanding the strenuous efforts of those interested in the prosecution to obtain his conviction. Frank Fredericks, the Walnut Hills druggist, who was charged with selling impure compound tincture of iodine, was also fortunate enough to be acquitted, after the jury had remained out all night. These two victories have rather elated the druggists, and they really think it is foolish that they should lose a single case. In fact, parties on the inside claim that the druggist ought to beat every case with ease. Some druggists have been arraigned—or will be soon—for selling impure solution of cochineal, which is used about once a year for the purpose of coloring Easter eggs. When it became known that druggists were arrested on this charge, there was considerable laughing up sleeves. The charge is thought to be bordering on idiocy from the fact that it is so generally known that cochineal is used only as a dye, and never internally The average druggist may sell two ounces of this article in a year, but a great many won't sell even this much.

DAYTON DRUGGISTS REPORTED ANXIOUS FOR A TILT WITH THE FOOD COMMISSIONER.

"You will notice that the Food and Dairy Commission has not tackled the druggists of Dayton yet," said a well-known druggist the other day, "and I tell you the reason. The pharmacists of the Gem City are organized. Every man in that city belongs to the association, and in union there is strength. In fact, the druggists of Dayton are a little anxious to have a tilt with the Commission, as they claim it would be an easy job to come out of the fray victorious. There is not a cutter in that town, and such unison should be an object lesson for the local druggists. If our fellows would only get together like the Dayton men we would have little trouble in soon routing the Food and Dairy Commission, or making its officers direct their efforts to other branches of trade. Let them go after persons who are known to adulterate everything they get their hands on, and not molest the pharmacists who have been quietly serving the public for years. I for one think it is far from right."

Kentucky Pharmacists Want the Law Amended.

The Kentucky Pharmaceutical Association will present a bill to the legislature at an early date involving an important amendment to the statute concerning pharmacists. The law now requires all drug stores in cities and towns of over 1,000 inhabitants to have only registered pharmacists to compound prescriptions. The new bill proposes to make this law apply to village drug stores as well, whether they have as many as 1,000 or 100 inhabitants.

The New Pharmacy Bill in Massachusetts.

THE BOARD CHARGED WITH BULLDOZING—TEMPERANCE PEOPLE SUPPORT THE BILL—A SALEM EDITOR HAS SOMETHING TO SAY—LAWRENCE AND LYNN DRUGGISTS JOIN THE OPPOSITION—SIXTH CLASS LICENSES FOR OTHERS THAN DRUGGISTS.

BOSTON, February 22.—Another hearing on the legislative bill to regulate the practice of pharmacy, was held last Monday in the rooms of the Committee on Health at the State House. William W. Bartlett, for the remonstrants, read his protest against senate bill No. 7. In answer to the question concerning the object of the Alliance, of which Mr. Bartlett is president and secretary, that gentleman said the organization was formed for the purpose of watching legislation affecting the drug trade. He said it was formed for a broader purpose than opposing the Sunday closing of drug stores. He did not like the methods of the Board, and said he understood it to be a regular thing for the members to bulldoze druggists. He had himself not only been bulldozed, but had been insulted by the Board. Mr. Bartlett said further that an unregistered clerk could put up a prescription almost as well as the majority of registered pharmacists. The prescriptions were nearly all for patent medicines, and all that was necessary was for the clerk to pull off the label and put on the prescription. This remark of the witness gave the pharmacists present something to smile at, and they did so out loud.

Mayor Rockwell, of Fitchburg, representing the Fitchburg Druggists' Association, said the imputation of drunkenness was a gross insult to the druggists of Massachusetts. He criticised the bill, because it will compel every druggist to get a certificate of character before he can get a license from the aldermen or town authorities. Samuel Meadows of South Boston, James Sullivan of Springfield, Mr. George of Roxbury, and Mr. Tate of Clinton, also spoke against the bill.

INDORSES THE BOARD.

A resolution expressing confidence in the State Board of Pharmacy was passed at a recent meeting of the Massachusetts Total Abstinence Society. The society declares that no agency in the Commonwealth is doing more to remove the evil of intemperance, as promoted by the druggists, who turn their stores into liquor saloons.

This society is in favor of the legislative bill, which provides that license fees shall go to the State, and is also in favor of women voting on the license question, as they now do for the school committee. This sentiment found expression at a meeting held last week, at which there was an unusually large attendance

SALEM EDITOR SPEAKS HIS MIND.

One of the Salem papers referred editorially to the agitation against the new bill to give the State Pharmaceutical Board more power. It said: It may be pointed out that it is very bad law-making to place arbitrary powers in the hands of any board or man, to the extent of making the action taken subject to no appeal and possibly simply on ex parte hearing. There should be no provision by which a druggist could be de-

prived of his method of obtaining his livelihood, except he shall first have a fair hearing; and there should be further provision that the finding of the Board should be revised by some higher authority.

LAWRENCE TAKES A HAND.

The other night 16 of the Lawrence druggists held a meeting, at which the proposed change in the pharmacy law was freely discussed. A vote was taken that the local association condemn the bill as a whole. The vote was 14 to 2, the two being, it is reported, Messrs. Emerson and Ketchum, who favored the bill, with the objectionable feature left out, the feature being the clause which gives the commission power to take away certificates without the right to appeal. The sentiment of the meeting was that the clause will have to go when the bill reaches the house.

LYNN APOTHECARIES OPPOSED TO IT.

A committee has been appointed by the Lynn Druggists' Association to oppose the passage of the law relative to pharmacy, and the committee instructed to use all means in its power to defeat the bill. The Lynn association is officered by Sydney P. Kenyon, president; C. Sargent Bird, vice-president; Frank E. Bickford, secretary and treasurer.

AT THE BOARD'S DISCRETION.

A bill that will undoubtedly excite more than ordinary interest has been introduced in the Legislature. It provides that licenses of the sixth class may be granted to persons other than druggists --in the discretion of the Board. The measure has been referred. The fee for such licenses is placed at $1.

After the "Cutters" in St. Louis.

ST. LOUIS, MO., February 18.—All kinds of rumors are afloat as to what is going on between the local wholesalers, the "cutters," and the patent medicine manufacturers. That something is taking place is very evident from the quiet meetings that have been held and the kicks that some of the cutters are making. It might be well to state that the term "cutter" as used in St. Louis means those druggists who cut prices because they want to do so—not because they are obliged to do so—and who fought the Apothecaries' Society and Retail Druggists' League while those organizations flourished in this city. All St. Louis druggists cut prices more or less. As near as can be learned, the proprietary men and the wholesalers have come to an understanding by which the cutters, or any one else for that matter, cannot buy direct from the manufacturers. It is quite certain that, no matter what amount they purchase, there is only one price. This will enable the small suburban pharmacist to meet the price of the great down town stores who advertise such low prices on certain standard patent medicines. The druggists all over the city are jubilant over this. For months, or even years, they have watched these down town cutters sell certain patents at a figure below what they could obtain from the wholesaler.

Annual Meeting of the National Association of Perfumers.

The third annual convention of the Manufacturing Perfumers' Association of the United States, was held at Rochester last week. The sessions were held at the rooms of the Chamber of Commerce, and after all of the business was disposed of the representatives were regaled with a banquet at the Rochester Club.

A large amount of purely routine business was disposed of, and when the adjournment was taken it was to hold an extra session in New York City some time during March next, the exact date to be fixed by the executive committee, which has the matter in charge. It was also decided to hold the next annual session in New York City.

The president of the association during the past year was Alfred G. Wright, of this city, and the delegates present paid him the deservedly high compliment of a re-election. The vice-president, secretary and treasurer were also chosen to fill their old positions for the ensuing year.

The present officers of the association are as follows: President, Alfred G. Wright, Rochester; vice-president, Theodore Ricksecker, New York; secretary, Henry Dalley, New York; treasurer, Sturgis Coffin, New York; executive board, Robert C. Eastman, Philadelphia; Justin E. Smith, Detroit; John H. Winkelman, Baltimore; Adolph Spiehler, Rochester, Richard Hudnut, New York.

A large attendance is anticipated at the adjourned meeting to be held next month in New York City.

The Advance in Price of Proprietaries.

The advance in the wholesale price of several proprietary remedies seems to have been in large measure due to the agitation on the part of the jobber toward securing better discounts. This reference seems justified by many of the facts in the case, and in particular by certain portions of the following letter, which has been sent to the jobbing drug trade by Dr. R. V. Pierce of the World's Dispensary Medical Association:

From the number of communications that we are receiving from jobbers located in all parts of this country, in relation to prices and terms for our goods, it is evident that there is a concerted action looking to the same end "all along the line," and all aiming to secure 5 per cent. extra off our present prices.

While we have great respect for the opinions of our distributing agents, nevertheless we have to question the wisdom of this general movement.

THE BASIS OF THE REBATE PLAN.

Some years ago, when the rebate plan was first broached to us, we were assured that if we would adopt the plan and grant 10 per cent. discount on our prices to retailers, that the jobbers would all be happy, and that they could make a fair profit on such an arrangement. Now it seems that 10 per cent. does not pay the cost of handling the goods, according to the consensus of opinion, as expressed by jobbers.

THE EXPENSES OF THE JOBBING TRADE.

This would seem to indicate that the expense of conducting the jobbing business had been greatly increased in the years since the rebate plan was adopted. This we judge to be the case also from the discussion which we have listened to annually at the meeting of the N. W. D. A., and we have also gathered from such discussion that the aggressive competition which is going on between the jobbing houses has resulted in their sending out an inordinate number of travelers, canvassing the territory over very frequently, and otherwise largely increasing the expenses of running their business.

This being the case, what assurance have we that if an extra 5 per cent. be granted on our goods, that this will be adequate to meet the increased expense of handling the jobbing business for years to come and afford the jobbing business for years to come and afford a satisfactory profit on our goods? What reason is there for believing that this extra 5 per cent. will not simply serve as a further "bone of contention," an extra incentive for still more extravagant methods of doing business, with here and there such cutting of prices on the part of some of the less loyal ones, and finally resulting, in all probability, in the breaking up of the rebate plan itself and going back to the "free for all and the devil take the hindermost" method of the days before the rebate system was established?

INCREASED DISCOUNTS A GOOD THING FOR THE CUTTER.

One thing seems very evident to us—*i. e.*, that the Cincinnati house which has been so troublesome in the past will be delighted at every advance in the discount on goods, knowing that thereby they will the more easily obtain their supplies, "by hook or by crook," through irregular and roundabout channels, and that it will give them a greater margin to divide up and use as a bait for further trade. They have made their boast that they can make some money on even 5 per cent., as they do not send out any travelers, do their soliciting through circulars, and have none of the extravgant expenses of other houses, who send out a superabundance of travelers and conduct their business on more expensive methods.

AN EXTRA FIVE PER CENT. WILL KILL THE REBATE PLAN.

We do not claim to be prophets, nor the sons of prophets, but we will venture the prediction that if this 5 per cent. extra discount is generally granted the rebate plan will "go by the board."

This we should very much regret to see, because we believe that the jobbers are doing better to-day under a straight 10 per cent. than they ever did before the rebate plan was adopted. Furthermore, that if *all* the proprietors, in the past, had been required to give 10 per cent. off, that if large lines of goods which have heretofore been on the rebate list had been eliminated therefrom (and they never ought to have been put on the list), the jobbers would be doing fairly well to-day. By eliminating those goods and requiring all proprietors to sell their preparations through jobbers only and not give the cream of their business to the big retailers, and by cutting some of the extravagance in the employment of an excess of traveling sales agents, such improvement in the jobbing trade would be brought about that, in our opinion, there would not be the complaints, annually heard, that "it costs 10 per cent. to do business and therefore we can make no money."

The foregoing suggestions may seem to be somewhat impertinent, coming, as they do, from manufacturers, and dealing with matters outside our personal affairs, yet it has seemed to us that there is some excuse for our offering them in veiw of the fact that we were assured some years ago, when a committee of the N. W. D. A. called upon us to induce us to adopt the rebate plan, that 10 per cent. discount would be entirely satisfactory and that the jobbers would be able to make a fair profit thereon.

ANY ADDITIONAL DISCOUNT MUST BE ADDED TO THE RETAIL PRICE.

One fact further may as well be stated, and that is that if we should, at any time in the future, see our way clear to give an extra 5 per cent. off on our goods we shall certainly have to increase our prices to the retailer. The cost of advertising, which is a large factor in the expense account of every proprietary manufacturer, has advanced rather than declined in the past few years, and yet newspapers are becoming so cheap that the average farmer and mechanic get from four to a dozen papers at a cheap price, whereas they formerly only received one or two at most, and as a consequence the papers are less thoroughly read and the advertising worth correspondingly less. As advertising in these costs as much or more than formerly, it does not require any great sagacity to see that the manufacturer's profits are greatly reduced.

THE MANUFACTURER HAS SUFFERED AS WELL AS THE JOBBER.

Under all these adverse circumstances and the stringency of the times, if the jobber has had difficulty in showing a balance on the right side of his ledger, the manufacturer has also suffered correspondingly and it has taken a good deal of nerve for him to start out on an expensive advertising campaign under such circumstances.

Under the conditions which confront us, we cannot, much to our regret at present, see our way clear to make our terms different from what they have been for several years past, notwithstanding that we would very much like to do anything in our power to favor our distributing agents.

New Pharmacy Law for Maryland.

The Maryland Pharmaceutical Association, in conjunction with the Maryland College of Pharmacy, is trying to have a pharmacy law passed.

Section 1 of the bill sets forth that it shall not be legal for any person to retail or dispense drugs, medicines or chemicals, or to compound or dispense physicians' prescriptions, or to open, own, or conduct any pharmacy for retailing, compounding or dispensing the same, unless these persons shall be or shall employ in charge of said pharmacy a registered pharmacist or qualified assistant.

Section 2 provides that every pharmacy, store or shop where drugs, chemicals and medicines are sold, retailed or displayed for sale at retail, or where physicians' prescriptions are compounded, shall be considered a pharmacy within the meaning of the law.

Section 3 describes that a registered pharmacist under this law must be a person who has had four years' continued practical experience in pharmacy, where the prescriptions of medical practitioners are compounded, and who has passed a satisfactory examination before the Maryland board, or who has been for the same period of time practically engaged where prescriptions of medical practitioners are compounded, and has been personally engaged in the business of a dispensing pharmacist, or who is registered as a pharmacist in Baltimore at the time of the passage of the act.

Section 4 provides that a qualified assistant shall have had at least two years' continued practical experience in the pharmacy, as is provided in the preceding section. Such a qualified assistant shall only act in the absence of the registered pharmacist in charge of the pharmacy in which the qualified assistant is engaged, and he can only do this under the regulations prescribed by the Board of Pharmacy. And the qualified assistant cannot engage in business on his own account or take entire charge or manage any pharmacy.

Section 5 provides that the Maryland State Pharmaceutical Association shall nominate 15 persons, ten of whom are to reside in Baltimore and five in other counties of the State, from whom the Governor shall nominate a board of five commissioners, three from Baltimore and two from other parts of the State, and these shall constitute the Maryland Board of Pharmacy.

Under section 6 the secretary and treasurer is to receive a salary to be fixed by the board, and the other members to receive the sum of $5 each day they are actually engaged in the service. The board is to hold meetings at least once in three months in Baltimore, or at any other place where it may be deemed expedient.

Section 8 provides that any person who, after the passage of this act, may sell at retail medicines, drugs or chemicals for medical use in the compounding of prescriptions for that State, without complying with the requirements of the act, shall be guilty of a misdemeanor, and subject to a fine of $50 for every week he shall continue to so vend retail drugs, medicines or chemicals for medicinal use.

Section 9 provides that any pharmacist who shall forward to the State board, on or before June 15 next, satisfactory proof, with affidavit that he has had four continuous years' active experience in pharmacy, compounding and dispensing medicines, and that he was engaged in the business of dispensing pharmacist on is own account in Maryland at the time the act takes effect, shall, upon the payment to the board of $2, be granted a certificate of registration as a registered pharmacist, without examination. Annually thereafter he shall pay to the board not more than $1 so long as he continues to act as a registered pharmacist, but if he fails or neglects to register the advantage given to him by this section shall be forfeited. This section, however, shall not apply to any pharmacist engaged in business in Baltimore who is not registered as required by the act entitled, "An act to prevent incompetent persons conducting business as pharmacists, or vending at retail drugs, medicines or chemicals for medicinal use in the city of Baltimore." Approved April 1, 1887, and amended in 1892.

Under section 10, in the case of the death of a registered pharmacist doing business under this act, the legal representative may continue the business for the benefit of the estate of the deceased under the control of a registered pharmacist. Any assistant or clerk in any pharmacy, not less than 18 years old, who shall not have the qualifications of a registered pharmacist within the meaning of this act, or who, when the act takes effect, shall have been employed or engaged for two years or more continuously in the pharmacy or pharmacies as described in this act, shall, upon application for registration and the payment of $1 within 60 days after the act takes place, be granted a certificate of registration as a qualified assistant, without examination. Annually thereafter he shall pay to the board 50 cents so long as he remains a qualified assistant.

Section 12 sets out that no person, unless he shall be a registered pharmacist or registered qualified assistant, can compound or dispense drugs, medicines or prescriptions, or sell at retail or dispense poisons for medicinal use, except under the supervision of a registered pharmacist. Any registered pharmacist violating this act, or permitting it to be violated in his store, is subjected to a fine of not less than $10 or not more than $50. This act shall not be construed as preventing any acting physician from preparing any prescriptions, nor shall it prescribe or prevent the sale of patent medicines, nor shall it prevent the sale of medicines of official strength, put up in original packages, bearing the name of the person or persons by whom put up or manufactured.

Section 13 provides against adulteration.

Another "Free Alcohol" Bill.

Senator Hoar has introduced in Congress a bill providing for the administration of Secton 61 of an act passed August 28, 1894, relating, among other things, to internal revenue taxes on alcohol. Secton 61, which was introduced by Senator Hoar, provided for the rebate or repayment of internal revenue tax paid on alcohol used in the arts or in any medicinal or like compound, but omitted the usual provisions for carrying the law into effect. No rebates were paid under the law, as the Secretary of the Treasury held that the act was inoperative pending further legislation by Congress. Claims for rebates running up into the millions have accumulated and Senator Vest proposed to amend by simply repealing Section 61. This raised a question as to the validity of existing claims and now Senator Hoar presents his bill as a solution of the difficulty. The Hoar measure provides for inspectors, defines their duties, etc., and levies upon rebate claimants a maximum of 3 per cent. of their claims to defray the expenses of inspection. The outcome of this free alcohol legislation will be watched with interest.

Hartford Druggists' Organization.

The Hartford, Conn., druggists held their annual meeting on February 6, and elected the following officers: T. R. Shannon, president; Josiah Howe and Edwin Crary, vice-presidents; C. H. Bell, secretary, and L. H. Goodwin, treasurer.

The newly elected president, T. R. Shannon, has been in the drug business in Hartford for 17 years. His first engagement was with A. Marwick, and they conducted a pharmacy on Trumbull street. At the end of three years the partnership was dissolved and Mr. Shannon has ever since conducted the store himself. Mr. Shannon graduated from the Massachusetts College of Pharmacy in 1876. He has been vice-president of the Connecticut Pharmaceutical Association, and is now a member of the Executive Committee. Several years ago Mr. Shannon was president of the Hartford association, and his recent election to his old position attests the high esteem in which he is held in the profession. He is also a member of several local organizations.

Caught on Bogus Quinine.

BEATRICE, February 6.—A well dressed man, who registered as J. O. Borst, Chicago, has been calling on several druggists of the city, representing himself as a quinine salesman, and offering to deliver the article at 18 cents per ounce.

The extreme low price interested several dealers, but they had some doubts about the article being genuine. Their doubts were dispelled, however, by the man subjecting the article to analysis. He had with him a quantity of chlorine water, for the color reaction, and as it necessitates some trouble to prepare and is not usually kept in stock his chlorine was used to make the test, which proved entirely satisfactory and the sale of 300 ounces was closed and the goods delivered. Suspicion was aroused later, and resulted in the determination to make a test with freshly prepared chemicals, and W. D. Simmons made the analysis this afternoon and reports the article as cinchonidine, with only a trace of quinine. The patrons of Mr. Borst are mourning the loss of about $42, as the article purchased is quoted on the market at less than 4 cents per ounce, against 18 cents which they paid. The packages delivered were marked "Sulphate of Quinine, Lion brand die Deutsche alkaloid und chemische fabrik depot, U. S. America, 132 and 134 Front street, New York."

The Best in the Market.

I would not be without the AMERICAN DRUGGIST for anything. I find it to be the best in the market.

CHAS. P. KALBACH.

BERNVILLE, PA., December 30, 1895.

NEW YORK CITY.

A. N. Gilbert has opened a new pharmacy at 527 Grand street.

R. J. Pay has opened a new pharmacy at Ninety-first street and the Boulevard.

A new pharmacy has been opened at 3057 Third avenue by Dr. H. S. Hutchens.

A new pharmacy has been opened at 185th street and St. Nicholas avenue by Mr. Vygan.

George S. Davis, of Detroit, made a flying visit to the New York branch of the firm last week.

Schaaf Bros. of 798 Eighth avenue have opened a branch pharmacy at 3409 Third avenue, between 116th and 117th streets.

W. D. Stearns, assistant manager of Frederick Stearns & Co., Detroit, spent a few days in New York City last week.

T. T. Stoutenburgh has disposed of his store at Almeda, N. Y., and bought a larger business at Davenport Center.

Lawyers' Pharmacy is a new store opened recently in Oswego, N. Y., by a former clerk of C. J. Vonwinkle.

John Carnrick, head of the firm of Reed & Carnrick, was last week elected to membership in the Hardware Club.

Hedwig Milloche of 1617 First avenue has recently effected a number of improvements in his store and has added a new soda fountain of ornate design.

B. G. Field has succeeded Mr. Stewart as manager of Richard Hudnut's handsome pharmacy at 925 Broadway. W. G. Austin has charge at night.

T. G Phinney, of Johnson & Johnson, is in the city again, after a stay of some months in Europe, where he went in the interest of his firm.

H. Vail & Co., publishers, 6 East Seventeenth street, New York, announce a new edition of Nelson's Poison Register, to be ready about March 1.

Charles D. Allee, formerly with Riker & Co., is making preparations to open a new pharmacy at Freeport, L. I. He has already invested in a soda fountain of the Low Art Tile pattern.

G. W. Hopping, treasurer of Seabury & Johnson, took advantage of the Lincoln Birthday observance in this city to make a flying trip to Montreal in the interests of his firm.

J. Wackerbarth, class of 1883, N. Y. C. P., is a recent acquisition to the staff of J. N. Hegeman & Co.'s Third avenue pharmacy, which is under the management of Julius Tannenbaum.

Isabella Eastburn has recently bought property in New Brunswick, N. J., and is having it fitted up for a drug store. The New York Store Fixture Company have the contract.

Kress & Owen, the well-known manufacturing chemists of Pearl street, have purchased from the Proteinol Company the sole rights to the manufacture and sale of Proteinol.

C. A. Grasselli, president of the Grasselli Chemical Company, the widely known manufacturers of glycerin, Cincinnati, was noticed in the chemical market last week.

Dr. R. V. Pierce, ex-president of the Association of Manufacturers of Proprietary Articles, was in the city last week, presumably on business connected with rebate matters.

One of the largest consignments of quinine entering the port of New York recently was billed to the New York branch of Boehringer & Soehne. It amounted to 263 cases.

It should be noted that the item in a recent New York morning paper about a certain Harry Thornton having been stricken in a suface car does not relate to the genial and robust Harry Thornton of P. D. & Co.'s Jersey staff.

E. A. Sayre of Seabury & Johnson's has had experience as a newspaper man. He was associated in the early sixties with Richard Watson Gilder in the editorial management of the Newark *Morning Register*.

Brodel Bros , 1679 Third avenue, are said to have the prettiest pharmacy on the East Side. The fixtures are of solid mahogany and the walls are relieved with fine art decorations. The fountain is of tile and of the latest design.

J. Horton Uhle of 144th street and Amsterdam avenue is making ready for the summer season by increasing his soda water facilities He has invested in a new tile fountain of the Low Art pattern.

Albert Schultz, for many years with J. N Hegeman & Co., is about to open a new store at Webster and Mulberry streets, Scranton. The Low Art Tile Company have secured his contract for an Art Tile fountain and counter.

A pharmacy is to be opened next month, under the Broadway Central Hotel, this city, by a Dr. Tompkins. There was a pharmacy located here about 12 years ago, which was owned by the elder Hegeman.

Fred W. McGee is making extensive alterations in his pharmacy at Rutherford, N. J. He will provide a private consultation room for the use of his medical patrons, and has extended his dispensing facilities.

The Manhattan Glassware Company have been incorporated at Albany to manufacture glass bottles and glassware in Brooklyn. Capital, $12,000. Directors: Helen Boley, Benjamin Boley and Solomon Bremas of Brooklyn.

O. W. Cauley is now in charge of Hazard, Hazard, & Co.'s big pharmacy under the Victoria Hotel. J. F. Finnerty, who has been connected with the firm for a number of years as assistant bookkeeper, is still looking after the accounts of the firm.

H. A. Cassebeer has been forced to move from his present location at 292 Sixtb avenue to make room for the extension of Siegel, Cooper & Co.'s mammoth establishment at Nineteenth street. He has leased new premises at Seventy-sixth street and Madison avenue.

The old and well-known Broadway Pharmacy in Nyack, lately and for many years under the management of Dr. D. DeGraff, has been purchased and completely restocked by C. Carter Cranmer, who intends to devote his entire time to the reconstruction of its business.

Alfred Hy. Mason, secretary of the college, has been on the sick list from some form of grippe ever since the last college meeting. His many friends will be glad to know that he is now on a fair way to recovery and was able to preside at the meeting of the Society of Chemical Industry, February 17.

Frank E. Brownell, the well-known Orange pharmacist, has placed his son, C. Newton Thompson, in charge of one of his stores there. Mr. B. is an *alumnus* of the N. Y. C. P., and will be remembered by many former classmates as the manager of Dugan & Merritt's successful Columbus avenue pharmacy.

A new style of ball for bowling has been tried by some of the men playing in the drug trade bowling tournament. There are holes in it for three fingers besides the thumb, and is the outcome of an idea on the part of the head of one of the houses, himself an enthusiastic bowler.

The Physicians and Surgeons' Association of New York City has been incorporated to keep books and collect accounts for physicians, surgeons, dentists, pharmacists and others. Capital, $10,000, and directors, Constant A. Andrews, Daniel Lewis, S. D. Powell, Paul Jones and Chas. B. Sterling of New York City.

J. E. Brannigan of Sixty-seventh street and Amsterdam avenue has had his premises entirely refitted by the New York Store Fixture Company. The refitting was made necessary after the destruction of the greater portion of the woodwork by fire caused by the accidental ignition of some material which he was melting over a stove.

Cyrus Calvert (C. P.), formerly of Calvert Bros., Cincinnati, was in town last week. C. P. is not interested in drugs to the same extent as formerly, and is now connected with a dye house. He has made a striking change in his appearance by shaving his upper lip, and old friends required a fresh introduction.

The rumors that J. N. Hegeman & Co.'s Theater Pharmacy at Thirtieth street and Broadway is for sale are without foundation. A reorganization was effected recently and A. Wiseman, N. Y. C. P. 1876, is now president of the corporation. John W. Ferrier is vice-president ; J. B. Glenny, treasurer, and H. Coleman secretary, as heretofore.

R. Tom Tanner, who is widely and favorably known throughout the New England States as one of Sharp & Dohme's most active salesmen, was in New York last week, and through the kindness of a friend was introduced to the charmed circle that meets once a day for luncheon in the Anarchists' Den, on Fulton street. K.'s favorite vintage, at 15 cents a half schoppen, was duly tested and approved of.

J. P. Jones, the New York State representative of Sharp & Dohme, is in town stopping at the Astor House. Mr. Jones is wearing his best 1896 smile, and is said to always carry with him the left hind foot of a graveyard buck rabbit killed on a Friday night, the 13th of the month, in the dark of the moon by a red-headed, cross eyed negro, with a silver bullet. His competitors say this is why Mr. Jones is so successful.

E. T. Green, the active New England representative of the Mallinckrodt Chemical Works, made his appearance at the New York office of the firm last week,

after a prolonged stay in the section allotted to him. He reports an increasing demand in the leading hospitals for the Mallinckrodt stronger ether for anæsthesia. He says it is now generally preferred over all other makes by eminent surgeons.

New York druggists are asking who is the Philadelphian who is opening a new pharmacy at 145th street and Edgecombe avenue, this city. A beginning was made and announcement of the early opening of the store displayed some two months ago, but the residents of that section have long since lost confidence in the announcement, as little if any progress toward completion has been made since the premises were rented. Somebody wants to wake up.

Kuehn & Lubbers, the New York representatives of the E. L. Patch Company, Boston, will move next week from their present location at 140 William street to more commodious premises at 133 William street. Desk room in their new offices has been assigned to Geo. H. Hanna, the New York representative of H. C. Fox & Son, glass manufacturers, Philadelphia, and to Wm. S. Boyden, Eastern representative of the Herf & Frerichs Chemical Company of St. Louis.

A. Cressy Morrison of the Pabst Brewing Company, Milwaukee, spent a few days in the city last week in the interests of the publicity end of the Pabst Company. Mr. Morrison will be remembered by a host of friends in both the wholesale and retail drug trade as a very active member of the N. W. D. A. He is well known as a story writer, and several of his works have appeared in the Christmas magazines. He is also an enthusiastic cyclist and was recently chosen vice-president of the League of American Wheelmen. The New York *Times* printed a portrait sketch of Mr. Morrison in connection with the latter event.

And now it is the Socialists who have discovered that the drug stores of this city are being run by the capitalists—that they adulterate their drugs, sell worthless medicines, give short weight, charge exorbitantly, etc. To overcome all this the Socialists belonging to the Workingmen's Sick and Death Benefit Fund have proposed to their organization to establish a drug store in the central part of the city, where members of the society and working people generally may obtain fresh and reliable medicines at the lowest possible cost.

Two new chemical companies were recently incorporated at Albany. They were the Equitable Chemical Company of New York City and the Electric Chemical Company of Orangeburg, Rockland County, this State. The former company have been incorporated to manufacture chemical preparations to treat diseases arising from germ infection. Their directors are Alfred Loader and Edmund A. Wheatley of New York City, and Minnie M. Williams of Harrison, N. J. The Electric Chemical Company have a capital of $60,000, and the directors are E. F. Leber and Albert Bernhard of New York City and Otto Porsch of Orangeburg.

A case affecting Germans becoming American citizens has just been decided by the Supreme Court of the Empire in Leipsic. F. W. Boehme, a druggist living in Brooklyn, N. Y., and a native of Leipsic, was sentenced by a lower court to pay a fine of 200 marks for emigrating to a foreign country without having fulfilled his term of military service. He appealed through his father from the decision of the court. The Supreme Court, in rendering its decision upon the appeal, finds that Boehme, as a duly naturalized citizen of the United States, could not be punished for an act committed through his emigration to America, but that he could be punished for any act committed prior to his emigration. The court, therefore, reversed the decision of the lower tribunal. If Boehme had left the country to escape military service the judgment of the Supreme Court would have been different.

VISITORS.

L. L. Pope, the tall representative of the Lawrence-Williams Company, Cleveland, was seen in New York last week.

Among recent visitors to the New York drug market we noticed: Wm. Kemmerle of Philadelphia, J. J. Strauss and D. L. Cook of Trenton, W. H. Jackson of Belmar, N. J.

H. E. Marvin of the Walding, Kinnan & Marvin Company, Toledo, Ohio, sailed from New York for Europe on the 8th inst. He is accompanied by his family and will make a brief stay in Italy.

COLLEGE STUDENTS UP FOR EXAMINATION BEFORE THE CITY BOARD.

Dr. Balser, the veteran secretary of the New York City Board of Pharmacy, was surprised the other day by having 118 applications for examination sent to him by as many of the senior students of the New York College of Pharmacy. It has been the custom heretofore for the students to separate after graduation, and to afterward seek registration either on their diplomas or by examination in whatever part of the State they might happen to locate in. Professor Diekeman suggested that, inasmuch as the examination certificate of the city board was accepted by the several county boards and by the State board in lieu of examination, it would be a great saving of time to the students (and money to the city board!) if the board examination could be taken before the close of the term, and while the students were attending lectures. Hence the recent increase of candidates for examination before the board.

FIRE IN A DRUG AND SPICE MILL.

The seven-story factory of Crampton Brothers, drug and spice manufacturers, which during the last 30 years has stood where Rutgers Garden used to be in the days when the lower East Side was a fashionable dwelling house district, was badly damaged by fire during the night of February 17. The loss is placed at $25,000, and is covered by insurance.

The mill includes Nos. 2, 4 and 6 Rutgers street. To the north, and fronting on Rutgers street, is a long line of tenement houses known in the neighborhood as Penitentiary Row. The mill overtops these by three stories, and the tenants of the row, fearing an explosion among the drugs, which, rumor had it, were stored in the mill, carried their furniture out to the sidewalk and made preparations for a hasty flitting. An hour's work on the part of the firemen, however, got the flames under control, and there was no explosion. The cause of the fire is unknown.

Branch of the Red Cross.

A branch of the Red Cross Society, which has its headquarters at Washington, has been established at 233 West 100th street, this city. Robert Wood Johnson, president of the firm of Johnson & Johnson, who is one of the trustees of the society and a charter member, spoke to a reporter for the AMERICAN DRUGGIST recently concerning the society and its objects. "The objects of the Red Cross Society," he said, "are to establish Red Cross Hospitals, provide ambulances and first aid to the injured in any calamity beyond the control of the local charities. The benefits of the association can be drawn upon at the call of the president and are not limited to any race, nationality or country. Its benefactions are freely tendered where the need exists, and the president of the society, Miss Clara Barton, is now on her way to Turkey to relieve the distressed Armenians. A grand entertainment for the benefit of the society has been projected and it will be on an immense scale. It will take place in the large amphitheater of the Madison Square Garden and will be under the auspices of many distinguished persons. Governor Morton and his staff are expected to be present. The entertainment will take the form of a realistic representation of the condition of war both before and after the existence of the Red Cross Society. Soldiers, guns and camp equipments will all be shown. The duties of a hospital steward during war will be performed by members of the Association who are apothecaries."

Mr. Johnson is taking a keen personal interest in the success of the movement and says it is being taken up by the leading people here.

We learn since the above was written that the New York Red Cross has been incorporated. Among the incorporators are Mrs. Charles H. Raymond, S. E. Barton, C. H. Cottrell, Page C. Dennis, Bettina A. Hofker, Dr. A. M. Lesser, Dr. C. Ruxton Ellison, Dr. H. G. Steger and Robert Wood Johnson. The objects of the Red Cross, as stated in its certificate of incorporation, are:

"To establish a corps of physicians, surgeons, and nurses for the purpose of attending the sick or wounded of all nations, creeds and sexes, in any position of life, in time of peace or war. To treat and nurse the sick and wounded at their homes, and if the latter do not afford the necessary facilities, to provide a place for them in which they can receive proper medical and surgical attendance. To supply the sick or wounded with pure medicines and surgical dressings of the best and purest material. To prepare and supply the Association of the American National Red Cross with nurses, medical and surgical aid and assistance as they may call for."

Captured a Burglar.

Charles F. Schinkel, a well-known Ninth avenue pharmacist, played a very clever part recently in the arrest of a safe burglar. A strange man of refined appearance called at the pharmacy, which is situated at the corner of Ninth avenue and Thirtieth street, a few days ago, and asked Mr. Schinkel if he was an analytical chemist. The pharmacist said he occasionally did analytical work and requested the stranger to make known his wants. The man coolly replied that he wanted a half a pound of nito-glycerin

for which he was willing to pay $10, or, if this was not enough, he would pay any reasonable price the pharmacist might name. He explained that he wished the nitro-glycerin for purposes of experiment. Mr. Schinkel was staggered for a moment, and when he got his breath he pointed out that such a quantity of nitro-glycerin was rather excessive, and finding that his visitor had no conception of the exceedingly dangerous character of the explosive in its concentrated state, he advised him to come again next day, when he said that he would see what he could do for him. Mr. Schinkel had his suspicions fully aroused by this time, and believing that he had a desperate character to deal with he communicated with Police Headquarters. The officer on duty at the time was at first inclined to make light of the occurrence, and said the man was a flim flammer who would probably end his business by attempting to trade gold bricks, but the druggist knew better, and prepared himself for a meeting with his nitro-glycerin customer. The man called next day, and the proprietor being out, the clerk told his customer that Mr. Schinkel was busy on the preparation of the explosive, and asked him to leave a deposit of $5 and call next day, naming an hour. The man did so, and pocketed a receipt for the money. Mr. Schinkel notified the Detective Bureau, and an officer was on hand to arrest him when he called. He indignantly protested against his arrest, but after he had been searched and a big revolver and $200 in bills found on him, he broke down and told the officer that he was a burglar, and that he wanted the nitro-glycerin to blow open safes with. The arrest is regarded as an important one, and Mr. Schinkel's part in the affair has met with the very heartiest commendation from the police authorities.

Students See Crude Drugs.

It has been the custom for some years past for the graduating classes of the Philadelphia College of Pharmacy to pay a visit of inspection under the guidance of the professors to the crude drug warehouses of Parke, Davis & Co., in this city. The week before Christmas is the time usually selected, but this year the visit was delayed until the second week in February. On this occasion the students were accompanied by Professors Remington, Bastin, Lowe, Ryan, Moerk and Morrison. The teaching faculty of the college consider this one of the most important days in the student's career, as it affords him a rare opportunity to acquaint himself with the appearance of drugs in their crude state, something which is not always possible during his term at college. The students were conducted through the extensive warehouses of the firm at 90 to 94 Maiden Lane by John Clay, the manager of the New York branch, assisted by Dr. Bird. The visit lasted four hours, and the greater portion of this time was spent in the lofts. The visitors were first conducted to the ground floor, where they were shown mammoth bundles of liquorice, orris root and other varieties of vegetable drugs in original packages. The original packages of aloes on the second floor proved an interesting sight to many of the students who had never heard of the custom of packing aloes in monkeys' skins. The distinction between guarana and gamboge was explained to the students by a comparison of the two substances in separate bottles. Other specimens seen on this floor were star anise, cocoa pods from Venezuela, pariera bark, &c. The third floor of the building is devoted to the storage of manufactured preparations. In going through this department the students were shown the great variety of articles turned out in Parke, Davis & Co.'s laboratories. One of the smallest and most popular articles shown was a neat vest pocket menthol holder, made of aluminum; these are made to retail at about five cents. The fourth floor was packed with asafetida, colocynth, and the ubiquitous cuttle-fish bone, which was found on every floor of the establishment.

The students were then conducted back to the second floor, where an elaborate hot luncheon was served. Mr. Clay presided at the center table, and short impromptu speeches were made by a number of the visitors. Professor Bastin was accompanied by Mrs. Bastin, and in rising to address the gathering, Professor Remington said that while the ladies of the party had joined in the expressions of appreciation which all felt, he knew that Mr. Clay would appreciate it greatly if he could hear from one of them, and Mrs. Bastin's name being mentioned, that lady responded very graciously to the invitation, and told how much she regretted not being a permanent member of the graduating classes so that she might enjoy a visit of this kind every year. Other members of the faculty made brief addresses, Professor Morrison making a very witty response to Mr. Clay.

It has been Mr. Clay's privilege during the many years he has been connected with the firm to receive the graduating classes of the leading schools annually, but, as he said, he has never been so much impressed with the high character of pharmacy students as with this year's class of the Philadelphia College of Pharmacy.

Drug Trade Bowlers.

The first of the series of matches arranged for by the Produce Exchange Club between the Produce Exchange, the Bank Clerks' League and the Wholesale Drug Trade Association, was rolled February 8, when the Produce Exchange met the Drug Trade Association and vanquished them. The men of pills, plasters and graduates played in good form, and the high score of the "Producers" might have been lessened considerably had the druggists enforced the rules of the game more strictly in the third game, when their opponents were short two men, but they generously allowed them to fill the vacancy with two men who played in the first game, and the druggists were outplayed. The scores were:

FIRST GAME.

PRODUCE EXCHANGE.	S.	S.	B.	Score.	DRUG TRADE.	S.	S.	B.	Score.
Riggs	2	5	3	159	Fisher	3	3	4	160
Fetteroif	1	5	4	152	Heck	0	6	4	140
Barber, J.	0	7	3	152	Hoffman	2	5	3	159
Rossen	4	3	3	195	Norris	1	5	4	142
Purdy	2	4	4	160	Timken	1	6	3	147
Totals.	9	24	17	818	Totals.	7	25	18	748

SECOND GAME.

DRUG TRADE.	S.	S.	B.	Score	PRODUCE EXCHANGE.	S.	S.	B.	Score.
Howe	0	7	3	154	Zann	4	3	3	177
Ely	2	6	2	160	Simonds.	1	2	7	114
Martin	2	4	4	138	J. Barber.	1	5	4	142
Mariager.	0	7	3	156	Chase	2	3	5	142
Carr	3	3	4	150	Cornish	2	6	2	172
Totals.	7	27	16	758	Totals.	10	19	21	747

THIRD GAME.

PRODUCE EXCHANGE.	S.	S.	B.	Score.	DRUG TRADE.	S.	S.	B.	Score.
Riggs	1	8	1	186	Barnes	2	3	5	135
Barber, J.	1	4	5	127	Ruddiman	2	5	3	164
Holmes, W.	3	4	3	156	Lawrence	3	2	5	138
Holmes, C.	0	6	4	144	Faulkner	3	3	4	159
Trafton	1	5	4	145	Tamlyn	0	8	2	159
Totals.	6	27	17	758	Totals.	10	21	19	755

The leading wholesale houses were represented at the tournament, the following being a partial list of those in attendance: SEABURY & JOHNSON: E. A. Sayre, L. W. De Zeller, P. M. Harrington, R. A. Tremper, W. Caughey, W. E. Tremper; PARKE, DAVIS & CO.: John Clay, Syd. H. Carragan; MCKESSON & ROBBINS: Chas. M. Weisz; BRUEN BROS. & RITCHEY: W. P. Ritchey; LAZELL, DALLEY & CO.: Mr. FOX; LANMAN & KEMP: L. Stevens; DAVID GREEN: David Green, Jr.; COLGATE & CO.: Sidney Colgate; and the following retail pharmacists, viz.: Fred Wichelns, Gilbert Reeder, Dr. H. Dehmhoff.

The Alumni Meeting.

A light attendance of students and alumni of the New York College of Pharmacy assembled in the lecture theater on Wednesday, February 12, to listen to a gentleman who told the tale of his experiences while on a trip through Europe. In London the lecturer had visited the Sailor's Home and Salvation Army Barracks and other East End attractions. He thought the Salvation Army was "a splendid institution." John Burns, the labor agitator, was quoted as "a learned man" who had expressed some opinions regarding the relative wickedness of New York and London. The lecture had absolutely nothing to do with pharmacy, and consisted for the most part of the expression of a lot of religio-sentimental observations on the social condition of the poorer classes of London and the capitals of Holland and Germany. As a lecture it could hardly be called a success. At its conclusion, chairman Graeser announced that Dr. Wendel C. Phillips would speak on "The Light and Dark Sides of Hospital Life" at the next meeting on March 11. The lecture will be illustrated with stereopticon views.

New By-Laws for the College.

The committee which was appointed on January 21 for the revision of the by-laws of the New York College of Pharmacy have completed their work and a vote on the adoption of the amended by-laws will be taken at the annual meeting, which occurs March 17.

The most important change proposed is the appointment of a chairman of the Board of Trustees, whose duties shall comprise attendance at all meetings of the Board of Trustees, and the appointment of standing committees of the Board. One effect of this change will be to relieve the president, if he so desires, of the endless detail work which has heretofore characterized the office.

The intention, as explained by a prominent member of the college, is to make it possible to appoint to the office of president any individual who has distinguished himself in pharmacy, any of the allied sciences or in work of a public character. The college has attained a position of eminence before the country, and it is thought desirable to have for its

head a gentleman of national reputation. It is understood that the movement meets with the approval of President Fairchild, and the amended by-laws will, it is thought, be adopted without opposition. The report will be signed by the full committee, composed of H. W. Atwood, chairman; T. J. Macmahan and Dr. Chas. Rice.

At the regular meeting, called for February 28, the Nominating Committee will present their report. Edward Kemp is slated for president, and Herbert Robbins for treasurer.

May Be a Millionaire.

Benjamin Altheimer, a Brooklyn druggist, is a lucky man. He conducts the Bijou Pharmacy in Smith street and also owns a drug store in Fulton street; but besides that he is one of the heirs to the vast estate of David Seymour Strauss, which has been accumulating in the Bank of England for many years. He is a great-great-great-grandson of Strauss, and the value of the fortune is put at the fabulous sum of $80,000,000.

Mr. Altheimer says he does not need the money, and is satisfied with a good business, which he has built up for himself.

"However," he said, "no one can blame me for wishing for it to come, and for expecting that it will. I may have to wait some time, and again I may soon have it. I can see lots of places where I could use the money and do lots of good with it. I would devote a good share of its income to that purpose."

If Druggist Altheimer is equally successful with a number of other heirs who claim part of the estate he will come into something over a million dollars after all expenses are paid.

Meeting of the Kings County Society.

The regular monthly meeting of the Kings County Pharmaceutical Society was held at the Brooklyn College of Pharmacy on Tuesday afternoon, February 11, President F. H. Pamphilon presiding.

The report of the Committee on Legislation proved quite interesting, as several members of the committee, including Messrs. Paradis and France, had attended a hearing on the Raines liquor bill in Albany and had protested against that part which applied to the pharmacists. The chairman, Mr. Werner, having been unable to attend, his place on the committee had been filled by Mr. Muir. After hearing the statements made, Mr. Raines promised the committee to consider an amendment if they would submit one prescribing a smaller fee for licenses to pharmacists. The committee stated that it appears from the newspapers that the bill has been changed since this interview by Mr. Raines, so that pharmacists will have to pay $125 instead of $250 annually for a license.

Secretary Bliss read communications from several members of Congress in response to the request made by the society that the free alcohol bill and the bills for the improvement of the position of pharmacists in the army and navy be given their support. A letter was read conveying to the society the thanks of the naval apothecaries stationed at the Brooklyn Navy Yard for the support which the society was giving to the bills for the reorganization of the pharmaceutical service of the navy. A letter was also read from Dr. George F. Payne of Atlanta, requesting that the commendatory resolutions which were passed on this subject be forwarded to the Secretaries of the Navy, Army and Treasury, and on motion of Dr. Brundage this was ordered done.

PROF. BARTLEY ON URINE ANALYSIS.

Prof. E. H. Bartley, dean of the faculty of the college, made a very interesting address on urine analysis for the pharmacist, devoting 50 minutes to the subject. He outlined the field of work which is open to the pharmacist in this direction, giving its limitations as well as its opportunities. We give an abstract of the address elsewhere in this issue.

VISITORS FROM NEW JERSEY.

The president announced the presence of H. J. Lohman of Jersey City and W. C. Alpers of Bayonne as visitors and invited them to address the society. In response Mr. Lohman made a few remarks concerning the National Formulary, stating that the paper presented by Mr. DeForrest at the last meeting of the New Jersey Pharmaceutical Association* had aroused much interest and was, he believed, bearing good fruit.

FOR BOTTLING VISCID LIQUIDS AND OINTMENTS.

Mr. Alpers showed the members a water bath which had been made under his direction for use in bottling petrolatum, &c. A description of the apparatus and an abstract of Mr. Alpers' remarks appear elsewhere in this issue.

The thanks of the society were extended to Mr. Alpers for his very interesting communication.

ENFORCING THE PHARMACY LAW.

Secretary Perkins of the Board of Pharmacy made some remarks explanatory of the work recently done by the board in the line of inspection. In December, 1894, there were 468 drug stores in Brooklyn, which by December, 1895, had been increased to 470, an increase by no means in proportion to the increase in population. This showed the restraining effect of the board on the increase in the number of stores. Out of the whole number but two very obscure pharmacies were found in which the law as to registration was not complied with.

THE TROUBLE IN PATERSON.

W. C. Alpers, secretary of the New Jersey Board of Pharmacy, said that the report of Mr. Perkins had reminded him of the fact that he himself had recently been called upon to investigate the condition of affairs in the town of Paterson and that the only unregistered person he found carrying on business was a lady. The task of disciplining a lady was, he said, a very delicate one, which he wished he could put upon Mr. Cameron, who, to judge from the tribute paid him by Mr. Perkins, seemed an ideal executive officer who would not even flinch from a woman.

The substance of Mr. Alpers' remarks are incorporated in an article on "Enforcing the Law in New Jersey," which appears on another page of this issue.

DRUGS IN GROCERY STORES.

At the request of the presiding officer, Donald L. Cameron, president of the Kings County Board of Pharmacy, reported the result of his personal investigations as to the manner in which the pharmacy laws were disregarded by the small grocers in East New York, Gravesend and Flatbush. In East New York and Gravesend in particular some excuse existed for this practice on the plea of convenience. In Gravesend in particular there is no drug store at all, and President Cameron said that some of the enterprising members of the society might take advantage of this hint, in response to which suggestion a voice said, "Why don't you take the chance yourself, Mr. Cameron?" No such excuse existed in Blythbourne, Bay Ridge and Fort Hamilton, as these were all amply supplied with drug stores. In one place he found a butcher store on one side of the room, a grocery on the other and a stock of drugs and poisons indiscriminately mixed up with both. On expostulating with the proprietor and telling him of the illegality of this procedure, the proprietor insisted upon Mr Cameron leaving at once and enforced his request by flourishing a butcher's cleaver. Mr. Cameron then called upon Superintendent of Police McKelvey, who was very courteous and promptly furnished an escort to accompany him in his further expeditions.

DRUGS IN DEPARTMENT STORES.

In response to a question from Mr. Paradis, Mr. Cameron stated that he had visited Batterman's drug department and asking for a long list of drugs and pharmaceuticals, he found that the only drugs kept by them were 2-grain quinine pills and a few bottles of essence of peppermint, one of which he bought. On inquiring of the girl who seemed to have charge, he was informed that "We did have them, but last week we were told that they were not to be sold." As the "last week" referred to was the week when the notice had been sent out by Superintendent McKelvey, that notice was probably responsible for the order.

At Loeser's he found quinine pills, essence of peppermint and essence of camphor to be the only drugs in stock. At Liebmann's nothing in the way of drugs was found. At Abraham & Straus's he found a full and complete line of drugs, samples of which were purchased for use in possible legal procedure. President Cameron doubted if the law could be made to apply to "patents," and was certain that it would be inexpedient to make any effort in this direction just now.

A special vote of thanks was passed to Mr. Cameron by the society for his excellent work. In the course of the discussion which followed Mr. DeForrest directed attention to the fact that Judge Moore had rendered a decision some years ago in the case of a procedure against grocers for the transgression of the poison law, in which the law was upheld.

Secretary Perkins said that he had been called upon by a salesman of a manufacturing concern who sold large quantities of headache cures, bug cures, &c., to grocers, and that the salesman had told him that he had been referred to the board by the Superintendent of Police to see how far he could go in the sale of his preparations. On being assured by Mr. Perkins that he could not "go" at all, the salesman said that under the circumstances he would have to withdraw the stuff already placed.

On invitation, Mr. Mayo, editor of the AMERICAN DRUGGIST, made a few remarks on the subject of enforcing the

* See AMERICAN DRUGGIST for May 25, 1895.

laws, and assured the members of the board that their actions had aroused the most widespread interest and commendation on the part of the drug trade all over the United States.

Two members of the Central Labor Union who had requested a hearing at the meeting were invited in and extended the privilege of the floor. The spokesman of the party, M. Raphael, made a plea for the support of the union by the drug trade, his principle argument being that the presence on a box of cigars of the union label was a guarantee that these cigars had been made under proper hygienic conditions, without danger of defilement by leprous Chinese or other possibly diseased laborers, and was also a guarantee that they were not the product of child labor. He said that all thinking men were agreed upon the ill effects that followed in any population upon the introduction of child labor, and he asked the support of his hearers to a movement which would do away with these ill effects and would aid in giving work to men who are trying to be good and upright citizens, and who as citizens patronized his hearers.

There being no further business the meeting adjourned.

NEW YORK STATE.

The druggists in Utica have universally agreed to close their stores at 9 p.m. from January 13 to April 1. The proprietors and assistants can appreciate the early closing during the winter months.

R. G. Killner's pharmacy, at 715 Bleecker street, Utica, was closed last month by friends who held chattel mortgages on stock and fixtures. Thos. F. Nugent, Ph.G., formerly with Messrs. John H. Sheehan & Co., purchased the store and is conducting the same. Mr. Nugent's popularty in that part of the city insures for him a successful business career.

The pharmacy of the Allen Drug Company of Geneva, N. Y., was totally destroyed by fire January 28. The loss is estimated at $5,000. This pharmacy is one of the best known in the northern part of the State. Mr. Allen, the proprietor, was formerly of Malone, and he has the reputation of conducting one of the most reputable businesses in the city of Geneva.

Maine Commission of Pharmacy.

At the recent meeting of this board, held in Portland, February 12, the following applicants were successful, out of a class of 11 : Addison B. Smith, Rockland, Me. ; Elbern F. Bowen, Lewiston, Me.; Edwin P. Smart, Augusta, Me.; Herbert C. Holmer, Fort Finfield, Me. The next meeting of the board will be held in Bangor, Me , Wednesday, April 8, 1896.

Found it Out Too Late.

A few days ago a Portland druggist's family enjoyed an expensive meal of oysters. In one of the bivalves nine pearls were found. Several of them were of large size, and the head of the family took them to a jeweler, who stated that had they not been cooked, the pearls would have been worth $500. From this time on all oysters in that family will be thoroughly examined before they go into the chafing dish.

MASSACHUSETTS.

Meeting of the Apothecaries' Guild.

MEMBERS MEAN BUSINESS.

BOSTON, February 18.—As indicating the intense interest taken by the members of the Apothecaries' Guild in the movement to regulate prices and suppress the ruinous cutting on proprietary medicines, the largest meeting of druggists ever held in this city took place on Friday, February 7. That the meeting was an earnest one was shown in the way the members stayed until the hour for adjournment not one leaving the hall for more than three hours. The meeting was in response to a circular letter mailed to every member and to their fellow druggists, and the result was a gathering of nearly 100. C. P. Flynn of South Boston, president of the association, presided, and in opening the meeting congratulated the guild on the bright prospects of success in the drug trade obtaining a uniform schedule of prices. The reports of the secretary and treasurer were accepted, after which a motion was passed that no jobber be admitted to the meeting. It was voted by the Guild that the Executive Committee be instructed not to issue a new friendly list until after the next meeting of the New England Drug Exchange. Letters giving legal opinion favorable to the organization, the existence and work of the Guild, were read by the secretary. S. A. D. Sheppard said he was glad the organization has got to a point where some fighting would have to be done. That would show if the members had any sand; that is to say, if they would be willing to put their money in it.

Henry Canning made a long address on the objects and purposes of the organization, and expressed a hope that all members would show that they meant business.

RETAILERS OPPOSE THE ADVANCE IN PRICE OF PROPRIETARIES.

George Cobb spoke of the advanced price of proprietary goods. He claimed the manufacturers had not done a wise thing in doing so at this time, especially when the fight of druggists versus cutters is on. He moved that such action be taken by the Guild as shall inform manufacturers who have advanced prices that such advance is detrimental to the interests of the retail trade. The motion was unanimously adopted.

Acting on the suggestion of Mr. Canning that members of the Guild put themselves on record as meaning business. A call for subscriptions was made, and in less than 30 minutes more than $1,200 was pledged. The sums varied from $100 to $10. Previous to adjournment Henry Canning offered the following resolution, which was adopted:

Resolved, Our cause is a just one; therefore we hope that the New England Drug Exchange will continue to act as our friend. We hope to be able to announce the names of all the jobbers on our friendly list; but if such be not the case we trust there will remain at least one firm to aid us in our cause. For if there be but one, that one will command the support and sympathy of the retailers in New England.

Officers of the Guild were elected as follows: President, C P. Flynn; vice-president, W F. Greene; secretary, George W. Flynn; treasurer, J. G. Godding. Directors: George W. Cobb, East Boston; F. W. Reeves, Cambridge; S. H. Smith, Jamaica Plain; C. A. Charles, Malden; J. W. Harriman and H. L. Garcelon, Lynn; A. L. Wyman. Boston; T. T. Reed, Roxbury, and N. W. Reeves, Boston. Mr. Reeves was continued as collector of subscriptions for the fund.

Annual Meeting of the New England Retail Druggists' Union.

BOSTON, February 21.—At the annual meeting of the New England Retail Druggists' Union to day, officers were chosen as follows: President, F. M. Harris; secretary, C. P. Flynn; treasurer, W. F. Sawyer; vice presidents, J. Allen Rice, Massachusetts; D. W. Heseltine, Maine; James Duggan, Connecticut; James O. Hare, Rhode Island; A. W. Higgins, Vermont, and A. L. Wetherell, New Hampshire. There was a lively discussion in regard to cutting, and also about a suit brought by a notorious cutter against Cutler Brothers for alleged boycotting. Ex-Governor John D. Long will defend the firm, and Secretary Flynn told the union to-day that there is reason to think that the cutter will find he cannot buy goods at that house unless he agrees not to reduce the prices.

Registered as Pharmacists.

At the February examinations held by the Board of Pharmacy on February 12 to 14, inclusive, 41 applicants appeared. The following named received certificates: James E. Dreul, Harry S. Baker, Fred J. Sheehan, Israel B. Kronberger, Thomas A. Fardon of Boston; William C. Reycroft of Cambridge; Edwin H. Powell of Westfield; George W. Bradshaw of Lawrence; Harvey P. Bush of Pittsfield; William E. Dehey of Northampton; Leo B. Trafton of Melrose; Arthur S. Arthur of Lawrence; James B. Bolton of Fitchburg, and Frank H. Quimby of Milton.

Billings, Clapp & Co.

It is announced that Mr. Albion R. Clapp, who has been with the firm of Billings, Clapp & Co., since its establishment in 1857, has retired from the business, owing to the pressure of public and private duties.

While he no longer has any pecuniary interest in it, his good will will remain with the business, which owes its prosperity, in a large degree, to his work as the head of the manufacturing part of the business.

The business will be carried on under the same name as heretofore, and the aggressive policy, which has characterized it in the past, will continue.

Personal and Otherwise.

Fred Damon of Holliston will start in the drug business in Sherborn.

A bill has been introduced in the House to restrict the sale of opium.

Charles A. Smith, formerly of Webster, has arranged to open a drug store in Orange.

Thomas F. Godfrey of Northampton is offering his creditors 20 cents on the dollar. He has assigned, owing $5,500.

A new block has been erected in the northwest part of the city of New Bedford, and Henry T. Colson, well known to the trade, is to open a drug store there.

PENNSYLVANIA.

PHILADELPHIA, February 20. -- For some time past the professors of the Philadelphia College of Pharmacists have been missing their instruments and a watch was put on the students, but no one was detected in making the pilferings. About three weeks ago the chemistry department was broken into and a set of balances and a book of chemistry stolen. It was discovered that the screen had been torn off the back window and the thief had effected an entrance in this manner. As the balances were good ones and valued at about $75, it was deemed time to put a stop to these peculations and the matter was placed in the hands of the city detectives. The officers had the matter in charge for over three weeks, and notwithstanding they knew who the culprit was they hesitated to make the arrest as all the evidence they had was circumstantial.

It appears that the thief was formerly an assistant to Professor Trimble, named Gette, who was well known in the college. When he was arrested he denied all knowledge of the theft, but when he was confronted with the evidence he weakened and he is now awaiting his trial by the court. Gette secured entrance to the college by prying off the screen of the window. After he had secured the balance he then climbed over the door of Professor Trimble's room and secured a book on chemistry. Shortly after he had secured the above named articles he tried to dispose of the scales at an assay office in the neighborhood, but as the owner of this establishment was somewhat in doubt as to the usefulness of the scales, the young man went to the scale manufacturer to have them tested, and in this way he was recognized. The trustees of the college intend to press this matter, as it is thought it will be a lesson to all other students who imagine that they can take away any article they so desire.

Wm. McCorkle of Twelfth and Somerset streets has purcahsed a handsome soda water fountain.

George Y. Wood of Tenth and Spruce streets has decided to keep his store open all night. This is the only drug store south of Chestnut street that has its doors wide open during the full 24 hours.

Smith Bellis of Flemington, N. J., will shortly make a trip to this city to lay in a supply of goods. Mr. Bellis has been connected with the drug business of Flemington for a number of years and is well known and respected in this city.

Druggist Missing.

NORRISTOWN, Pa., February 16.—The friends here of Howard Lincoln Rayner, a pharmacist, have been informed that he has been missing from New York City for five months. He was a native of this place and a graduate of the Philadelphia College of Pharmacy He left his home, 669 Second avenue, on the morning of September 16. He appeared at the breakfast table dressed for traveling and informed his wife and father-in-law that he was going to make a short trip into Connecticut. He took with him a small hand satchel and $500. On September 25 his uncle, who lives in Philadelphia, received a letter from Mr. Rayner, dated at Buffalo. He is a young man, and his wife knows of no reason for his strange absence.

OHIO.

CINCINNATI, February 17.—The statement of State Senator John Q. Abbott that he had no means with which to employ counsel to defend himself against the charges of bribery brought against him by the Grand Jury caused a considerable sensation, as the Senator was reported to be wealthy. Pharmacists of the State are interested in the case, as the bribery is alleged to have occurred in connection with the passage of the pharmacy act, which was introduced into the Senate by Senator Abbott.

Heard About Town.

Louis Klayer now has his new pharmacy at Ninth and Elm streets in a good condition.

Druggist Ulen, the Sixth street "pill roller," got some unenviable notoriety last week through the sale of some cocaine to Jackson, the alleged Fort Thomas murderer.

Fire originating from some unknown cause destroyed $3,000 worth of interior furniture at Burkhart's drug store at 524 Main street at 5.45 last Wednesday morning.

Jacob Kotzin, druggist at Sixth and Mound streets, was arrested last Monday, charged with compounding prescriptions without being registered. He will be tried in the Police Court on the 18th inst.

Secretary Probst of the State Board of Health has sent out warnings to different parts of the State, asking the authorities to be on the outlook for small pox patients. They were expected to arrive at Youngstown.

Julius Hoffman, the clever clerk at Matt Yorston's Central avenue pharmacy, celebrated his twenty-fifth anniversary as an attache of that establishment one day last week. Julius has friends by the score who wish to see him at Yorston's for another quarter of a century.

MICHIGAN.

DETROIT, February 20.—Local option in Clinton County was last week defeated. A great many reasons are given for the result, and many say that if the measure had been voted on three weeks ago, before the decision of the Supreme Court in regard to conviction of druggists, it would have been carried easily. In this decision the court said that no druggist could be convicted on one complaint which had been proven.

Local Items.

Oscar W. Smith, who has been connected with Parke, Davis & Co. for a number of years, will hereafter make Baltimore his home. He has gone there to establish a branch hourse.

Frank W. Blair, formerly a clerk in the drug store of F. Hagerman, at Birmingham, has purchased a stock at St. Louis, Mich., and started in business for himself.

Fire broke out in the basement of E. T. Van Ostrand last week at Allegan, Mich. The stock and fixtures were almost totally destroyed by the heat and smoke. The loss was $5,000, and was insured for $4,400.

Carl F. Moll, druggist at Negaunee, will remove his store and stock and fixtures to Hibbing, Mich. He will begin business there on February 20. Moll will be the only druggist there and should do well.

The Eberbach Drug & Chemical Company, at Ann Arbor, have been the victims of petty thieves for a long time. Last week a large standard thermometer was stolen. This makes the third one taken this winter.

A good story is told of a local druggist. It is said that a certain well-known individual called and asked for some morphine to help him out of his trouble. After purchasing the drug he shook hands with the druggist and bid him a tearful good-by. Divining his purpose, the druggist compelled him to disgorge the drug, but only after dire threats

ILLINOIS.

CHICAGO, February 21.—The Kidnedine Medicine Company have been incorporated, with a capital stock of $2,500, by Arthur W. Campbell, Frederick W. Packard and John W. Brown. The principal office of the company will be in Chicago.

L. J. Remington, Raliegh, Neb., was in the city last week.

George W. Speers of Vinton, Iowa, spent several days here last week.

O. C. Neumeister of Sheboygan, Wis., who was recently married, passed here on his way to New Orleans, where he and his bride will pass a few weeks.

The Red Cross Hygienic Company have opened new offices at 60 Wabash avenue for their specialties in chemicals and disinfectants.

Eugene Vallens of the well-known house of Vallens & Co., manufacturers of cigars, is at present vistinig the Pacific Coast and expects to make a stay there for several weeks.

Mrs. Gervaise Graham, the well-known maker of toilet preparations, left here on February 5 for a business trip through Texas. She expects to be away about 30 days.

A. R. Lewis, representing Johnson & Johnson, returned on the 8th from his Pacific Coast trip, looking well and feeling very jolly, as his sales had been very much larger than those on any trip that he made in previous years. He says that Vino Kolafra is a big winner. Mr. Lewis leaves here on the 20th for a short Eastern trip.

Illinois College Graduates.

The commencement exercises of the school of pharmacy of Northwestern University was held February 4 at the Auditorium recital hall. There were 47 graduates in this class, which is considered a large number for the winter graduating class. The Grand Opera House orchestra furnished the music. Rev. Thomas A. King opened the exercises with prayer and Prof. E. Wyllis Andrews addressed the class, after which President Henry Wade Rogers conferred the degrees. The dean announced honors and Rev. Thomas A. King pronounced the benediction.

The honors in the senior class were awarded to Frank Runcorn Borden, John

Byrud and John Cuykendall Ordway. The Gilpin, Langdon & Co. prize was awarded to Otis Jesse Benson. The junior class honors went to Francis Berry Beck, Franklin Walter Halbkat, John Wesley Palmer and Charles Alexander Sayre. The Reception Committee was composed of the following: Oscar Brinkman, John A. Caryl, Bruno H. Goll, Jr., Franklin W. Halbkat, Clarence H. Henton, William L. Knuth, Cornelius L. McDermott, Henry W. Pond, Walter L. Sanger and William H. Sweet.

The members of the graduating class are:

Edward Bartz, Otis Benson, C. B. Blanchard, Gregory E. Blish, F. R. Borden, R. V. Breaid, P. C. Brines, Fred J. Brown, John Butcher, John Byrud, W. L. Campbell, John W. Dick, Ira E. Evans, J. M. Farnsworth, F. Forsyth, Jr., Vincent A. Fox, T. L. Gerner, Frank E. Giller, Albert C. Grant, B. Greenwell, Henry A. Gries, Hugh O. Jones, A. E. Kuhn, John L. McRae, O. E. Marshall, H. H. McDougal, W. E Mercer, H. F. Miller, Don M. Munger, John C. Ordway, A. L. Orr, Fred E. Palmer, W. M. Patterson, F. W. Patterson, H. H. Pinney, Otto Rohrlack, A. E. Rutherford, John M. Seaman, Mary E. Seaman, F. P. Siebel, A. Z. Sourwine, D. J. Sullivan, C. E. Sufton, Earle C. Swan, F. P. Theller, Elnathan Town, C. M. Turnquist.

The above class includes the largest number of midwinter graduates yet recorded at the university.

MISSOURI.

DRUG CLERKS' MONTHLY MEET.

The regular monthly meeting of the St. Louis Drug Clerks' Society was held at the College of Pharmacy building, on Thursday evening, February 13. The secretary was instructed to write a letter to our representatives at Washington, asking them to support the bill proposed by the A. Ph. A., for the advancement of the pharmacist in the army and navy. It was also decided to secure a different hall in which to hold their meetings, and a committee was appointed to look after same. More copies of the constitution and by-laws will be struck off for distribution. The Entertainment Committee reported that they were making arrangements for two boat excursions this summer. The following names were proposed for membership: O. F. Bousch, F. L. Whelply, P. H. Fischer, G. W. Stiehl, A. V. Marquardt, W. A. Webster, J. C. Thumser, A. C. Stoffer, R. C. Eckert, T. R. Runge, W. F. German, T. J. Poppitz and H. D. Spork.

A LECTURE ON THE PRESCRIPTION.

Prof. Hemm delivered his annual lecture on the Prescription to a large audience of pharmacy and medical students. The lecture was given at the College of Pharmacy Building. He gave a short history of the well known sign which decorates the blank, and then devoted two hours to giving the boys practical pointers and advice which they could not have obtained by weeks of reading.

THE ANNUAL MEETING OF THE ALUMNI ASSOCIATION

of the St. Louis College of Pharmacy was held at the college building on the evening of the 18th inst. Over 50 members were present. After the routine business was disposed of the election of officers was taken up, which resulted as follows:

President, Theo. F. Hagenow; first vice-president, R. S. Vitt; second vice-president, F. C. Pauley; recording secretary, Z. A. Seitz; corresponding secretary, Paul Schneider; registrar, L. H. Behrens; treasurer, Chas. Gietner. Executive Committee, to serve three years: Oscar Bausch and Otto Clause; to serve two years—caused by Mr. Hagenow's resignation—Ambrose Mueller.

A Decision in the Hoff Malt Extract Case.

Decision has been rendered by Judge Coxe in the United States Circuit Court in the suit brought by the West Virginia Corporation, Johann Hoff *vs.* Tarrant & Co., for accounting, damages and to prohibit them from the use of the label under which they have been selling the Malt Extract, for which they have been agents since 1869. Tarrant's was the original Hoff's Malt Extract, introduced into the United States in 1866 by Leopold Hoff, which was sold in 1868 by Joseph S. Pedersen, acting as Leopold Hoff's agent, and which agency was transferred to Tarrant & Co. in 1869. Briefly the result of the suit is that Eisner & Mendelsohn, or the West Virginia corporation, Johann Hoff failed to obtain an accounting, damages, or an order to prohibit Tarrant & Co. from using the label that they have been using, and the plaintiff has to pay its on costs of suit.

The judge, however, was of the opinion that Tarrant & Co. should be required to print the name Leopold before the words Hoff's Malt Extract on their large label, so that the line will read: Leopold Hoff's Malt Extract, and in compliance with the opinion of the court, Tarrant & Co.'s label will in future bear the words: Leopold Hoff's Malt Extract, "Tarrant's," in addition to the signature of Leopold Hoff as manufacturer, which has always appeared there.

The decision in this suit is important, for the reason that it establishes and makes it a matter of court record that the Johann Hoff, for which the Eisner & Mendelsohn Company are selling agents, is a West Virginia corporation, only existing since May 27, 1891, and that it manufactures the article it sells as Johann Hoffsches' Malt Extract, in Newark, N. J., and it also establishes the fact that Tarrant & Co. import the malt extract they sell from Hamburg, Germany, where it is made by Leopold Hoff, who was the original intoducer of Hoff's Malt Extract into the United States in 1866.

"The other accusations against the defendant are either unfounded in fact or relate to distinctions so unsubstantial and acts so trivial that the court could not condemn them without denouncing in equally strong, if not stronger terms, the statements not in exact accordance with the truth which from time to time have appeared on the complainants' labels and bottles. In other words, a finding which would compel all the changes asked for would by direct implication require the complainant to hold on the threshold of a court of equity."

Wholesale Druggists' Prices.

As will be seen by reference to our quotation columns, a number of changes have taken place in the prices charged by wholesale druggists for small lots. The changes are not especially important and we refrain from giving space to an enumeration of them in this column. The more important embrace higher prices for Insect Powder and Cod Liver Oil. The following articles have declined, viz.: Benzoic Acid, Caffeine, Balsam Tolu, Cassia Bark, Pilocarpine Muriate. An addition to our list is Aseptoline, Edson's, which is quoted at $14 per dozen in 2-dram vials.

Review of the Wholesale Market.

NEW YORK, February 22, 1896.

It should be understood that the prices quoted in this report are strictly those current in the wholesale market, and that higher prices are paid for retail lots. The quality of goods frequently necessitates a wide range of prices.

The jobbing houses without exception have been kept busier during the past fortnight than at any time since the year opened. Importers and package dealers, on the other hand, complain of an absence of speculative inquiry, and the policy of caution which has characterized the drug trade for some time past is still in evidence. The annoyance and expense incident to handling small quantities are felt very keenly by both importers and jobbers, and give rise to some complaint. This disposition to purchase in small quantities, and frequently, is very generally referred to as the one flaw in the rebate system as applied to proprietary medicines, and is a constant source of dissatisfaction. The same conditions do not exist, of course, in the wholesale market, but reference is occasionally made to the disposition on the part of many retailers to make small invoices and frequently duplicate them. No feature of special interest has developed in any of the special departments of the general market since our last, and prices for the most part have undergone no great fluctuation. Insect powder continues to reflect a rising market Advices from the fisheries report a small catch of cod, and the oil is held more firmly and expected to advance The tone of the market is generally firm, though upon several of the leading staples the advantage appears to be with the consumer.

ADVANCED.	DECLINED.
Insect powder,	Balsam, Peru,
Bleaching powder,	Carbolic acid, lbs.,
Gum tragacanth,	Caffeine,
Short buchu leaves,	Guarana,
Jamaica ginger,	Gum chicle,
Verona orris,	Gum asafœtida,
Aleppy cardamon,	Alexandria senna leaves,
Buckthorn bark,	Naphtholine,
Ergot,	Opium,
Balsam copaiba.	Quicksilver,
	Jalap,
	Oil cloves,
	Oil myrbane.

DRUGS.

Alcohol has remained without any new features, and the demand does not increase beyond normal proportions. The formation of a new distribution company has had no effect on prices, and our quotations represent the market range.

Arnica Flowers have been taken quite liberally by the trade, and the outside quotation has been advanced to 6¼c. to 7c.

Balsam Copaiba is firmer from importers' hands, with Para quoted 37c. to 37½c., though ordinary quality can still be purchased down to 30c. to 32c.

Balsam Peru is weaker and the demand has not been stimulated by offerings at $2 to $2.30 for Hamburg and ordinary respectively.

Balsam Tolu is held at a slight advance

48c. to 50c. being generally required, but trade requirements are of a very limited character, and no transactions of importance have come to the surface.

Barks.—Buckthorn has improved in the interval and our quotations show a fractional advance. Cascara Sagrada is well sustained at 3¾c. to 4c. for new and 4c. to 4¼c. for old. The article is understood to be in fair supply here though no important quantities are offered to arrive.

Buchu Leaves, short, continue in moderate jobbing demand and sales are making at a slight advance over previous quotations, say 12c. to 16c.

Caffeine is still quoted somewhat irregularly and the market for the article remains unsettled. In some quarters $6 is still named as an inside price for quantities, but $5.75 would doubtless be accepted in others.

Colocynth Apples are taken in a slow and indifferent manner by the trade, though there is no pressure to realize. Trieste are maintained quite firmly at 58c. and Spanish at 30c.

Cod Liver Oil is offered less freely, and holders are indifferent sellers, with no large transactions to report. As noted elsewhere, this season's catch is likely to be a very poor one, and higher prices will probably prevail. Prime stock is generally held at 49c. to 50c., with up to 55c. and upward asked for fancy brands.

Ergot has been developing a higher tendency of late in foreign markets, with the result of strengthening values here for both Spanish and Russian. The range of the market is 15c. to 20c. for Russian and 19c. to 22c. for Spanish.

Guarana is being offered rather more freely of late and values have declined, with 60c. to 65c now generally quoted.

Insect Flowers are in stronger position, influenced by reports of higher prices in the foreign markets. Supplies here do not offer below 17c. to 18c. Powdered is steady, with 23c. to 26c. quoted firmly, according to brand and quantity.

Lavender Flowers have been in better demand of late, with numerous small sales reported within the range of 2½c. to 7c., according to quantity.

Menthol is offered more freely and sales are making in some instances down to the point of $4, though $4.15 to $4.25 is still quoted.

Morphine continues quiet, and only a limited demand is experienced. Nothing is openly offered below $1.50, though rumors of sales below this figure are common.

Opium remains in a dull and unsatisfactory condition. Quotations are irregular and the market is characterized by an undertone of weakness. Single cases have been sold down to $1.95, and no sales are reported at above $1.97½. The jobbing price remains at $2.05 to $2.10, with powdered quoted $2.25 to $2.35.

Quinine shows no action of any importance, the market, so far as this article is concerned, being dull and lifeless. Prices are without change. Manufacturers' agents still quote 30c. for P. & W. and 28c. for odd brands. Foreign, in bulk, is a trifle irregular, 26c. buying in some instances, though 26½c. to 27c. is the popular quotation.

Saffron has developed no new features of interest, though supplies of American are not openly offered at less than 40c. The range of $6.50 to $7.50 is quoted for Valencia and $4.75 to $5.25 for Alicante.

Senna Leaves are reported higher in the foreign market, but the range here is without change, being about 6c. to 15c. Alexandria is firmer and quoted 14c. to 25c., with a great scarcity of true grades reported.

Vanilla Beans are maintained in strong position and the demand of late has improved; $6 to $12 will buy whole, and $5.50 to $6 is asked for Mexican cuts.

DYESTUFFS.

Aniline Salt has sold freely in the interval, several large lots changing hands at 12c. to 13c.

Cutch has been in better demand and several large sales are reported, mostly at 4½c. to 4¾c. for bales, and 5c. to 5½c. for boxes.

Gambier is not quotable higher but the market is firmer in tone, with spot lots offering at 4¼c. Quotations on forward shipments are placed as high as 4½c. for sail and 4¼c. for steamers.

Indigo continues in fair steady demand, with sales making at previous prices.

Nutgalls have continued in good demand, with sales at 13c. to 13½c. on the spot.

Sumac continues in fair active demand at a slightly higher range. Sales of Sicily are reported at $48 to $50, and of Virginia at from $38 to $38.50.

CHEMICALS.

Arsenic, White, has hardened a trifle in the interval and up to 7c. has been asked for small quantities, with the range quoted 6c. to 7c.

Bleaching Powder has been in demand and is a shade firmer, say $1.87½ to $2.

Blue Vitrol at less than 3½c. in carload lots is scarce at the moment and with demand running fairly prices remain quite steady.

Borax is without important change. As a rule, receivers ask 5⅜c. for concentrated and 6c. for California refined, in carload lots, but these figures are being shaded ⅛c. to ¼c. in some quarters.

Brimstone, crude, is in fair supply here and purchases can be made at $15.25 for unmixed seconds and $15 for thirds. The same prices were quoted for lots to arrive.

Chlorate Potash is still obtainable from second hands at under 19½c. on spot or for early shipment. Importers, however, are very firm, with a lower quotation than 9½c. the exception on any delivery.

Cream Tartar is offering from second hands at about ¼c. under manufacturers' prices, but the supplies offering are in exceedingly small lots. The quotations from manufacturers remain at 27c. to 27½c.

Nitrate Soda is well sustained at the previous range of, say, $1.72½ to $1.75.

Tartaric Acid, crystals, is not offered from second hands below 32½c. Manufacturers are very firm and ask 33c. to 33¼c., for crystals, and 32½c. to 33¾c. for powdered.

Quicksilver is easier in tone, and we quote the range a fraction less, say 50c. to 51c.

ESSENTIAL OILS.

Anise continues in fair jobbing demand and steady, with sales at $2.60.

Cassia continues quiet, with the price ruling steady at $2.50 to $2.60.

Citronella meets with steady fair inquiry and values are well sustained at the range of 47½c. to 50c. for drums.

Myrbane is slightly easier and 13c. will now buy.

Peppermint continues quiet, without, however, any noticeable pressure to realize on the part of holders.

Spearmint is maintained at $2 to $2.25, with the demand moderate at this range.

Wintergreen is maintained at full previous values. Supplies of new are not coming forward as rapidly as was expected. Our quotation of $1.25 to $1.30 still holds.

GUMS.

Aloes remained quiet at nominally unchanged prices.

Asafœtida continues inquired for but values are weak, owing to heavy offerings in the foreign market. Prime quality may be obtained at 14c. to 15c. and ordinary at 12c. to 13c., on the spot.

Chicle has been in good demand with numerous large sales reported at 36c.

Senegal and other arabic gums are stiffening in value and an advance all along the line is anticipated by dealers.

Tragacanth is firmer and a slight advance is asked in some instances over the quoted range.

In other gums there is nothing new or interesting to report.

ROOTS.

Alkanet is in steady moderate request and sales are making at a slight advance, say 5c. to 5½c.

Althœe is firmly sustained in view of a slight scarcity, and we quote the range at a slight advance over previous figures.

Gentian is held with noticeable firmness at 4½c., for spot goods. The available supply in this market is small, and this, coupled with the fact that the import cost is relatively higher than local jobbing prices, serves to sustain values.

Ginger is selling fairly within the range of 16c. to 18c. and 17½c. to 19c. for unbleached and bleached respectively, according to quality.

Ipecac is meeting with some attention, but prices are nominally unchanged, the extremes of $1.30 to $1.40 being still quoted. The foreign market is reported firmer.

Jalap is dull and neglected at the moment and supplies are offering freely at 14c. to 15c. for Mexican.

Orris, Verona, meets with moderate attention, and with generally small stocks the price is maintained at 15c. to 17c. Florentine is held and selling fairly at 21c. to 22c.

Sarsaparilla, Mexican, has weakened to 5¼c., with only a limited demand experienced.

SEEDS.

Canary continues quiet, but the market appears steady in tone at 2⅛c. to 2¾c. for Symrna and Sicily respectively.

Caraway is steady, with 6¼c. the estimated lay down cost.

Celery is generally held at 12½c. to 13c., though some holders are willing to sell at 12c.

Hemp, Russian, is maintained at 2⅛c. to 2¼c., as to quantities, with a moderate business reported.

Rape is offering more freely and 2⅛c. to 2¼c. will buy.